



Editorial

Back to Prosperity

FOR a full year now the high priests, who tell us how business is going to be and why, have had their troubles. The popular forecaster is he who can always discern the gleaming white sails of Better Times on the horizon. However, it becomes positively annoying when the good ship refuses to make port. Some of the business-weather experts appear consistently to have mistaken the most gentle of zephyrs for brisk trade winds.

Of the business-intelligence men perhaps Roger Babson hits the mark as often as any. He is earnest and courageous. He has written a sensible formula for the safe conduct of business back to prosperity this fall.

In Chicago *Commerce* Mr. Babson says to men in places of business leadership:

“1. *Reduce overhead*—industry and merchandising are handicapped by useless and unnecessary expense; get the drones into productive work . . . out into the field to encourage consumption.

2. *Give better measure*—I am not so keen for price reduction as I am for improving the product and giving better value for the money paid.

3. *Increase research work.*

4. *Advertise more*—now is the time to increase advertising appropriations. During the last two years I have consistently refused to recommend increased advertising appropriations. Now the situation has changed. Advertising is performing a very important economic function. I believe that all business concerns can help themselves and help the country as a whole today by increasing advertising appropriations.”

All business has been climbing a hill, a

long, steep one. No industry knows that better than our own. It looks now as if we might be near enough to the top to shift gears, step on the gas and go somewhere. Now is the time to increase advertising appropriations! Advertising will produce if (1) the product is real value at the price asked; (2) if the advertising is well planned and prepared and (3) if it is placed where it actually reaches buyers of the product. Candy manufacturers all too often place their advertising where it cannot influence their sales. We can say that since the columns of *THE MANUFACTURING CONFECTIONER* are not and never have been open to candy advertising. Our readers make confectionery to sell. They do not buy it.

Now is a good time to advertise! It is a good time, too, for advertisers to re-appraise their policies and to cut loose from wasteful habits. There was never a time when it is so important for advertisers to make certain they are telling their story persuasively to those who can buy.

Weigh the Facts

IN the September issue (p. 72) we called attention to a public hearing which will shortly be held before the Tariff Commission to consider revision of the present 40 per cent ad valorem duty on candy and sweetened chocolate. While imports of candy into the United States are relatively small compared with some commodities, they have shown a consistent increase during the last few years and this is a matter worthy of careful consideration by the industry.

Total imports of confectionery (including “sugar candy” and “prepared chocolate”) were a little under 1,700,000 lbs. in 1914. They decreased during the war, but

have been increasing steadily since then. In 1929 they had reached a total of a little over four million pounds with a stated valuation slightly over \$1,000,000, an average value of 25.2 cents per pound. The numbers of candy stores specializing in foreign candies which are now to be seen in New York, Atlantic City and various other cities furnish a visual demonstration of this growth in imports.

The United Kingdom is the largest exporter of confectionery to the United States, sending us about 700,000 lbs. in 1928 and 600,000 lbs. in 1929. Germany runs a close second and is followed by Netherlands, Austria, Russia, Latvia and Italy in the order named. We import very little confectionery from our next door neighbors, Canada and Mexico. The lowest listed price per pound, about 6 cents, is for confectionery imported from China and Mexico and the highest price is 48 cents, applying to imports from Italy.

Since retaliatory tariffs are apparently the order of the day, it is well to consider our exports of confectionery in relation to imports. With the exception of the United Kingdom, which is our best confectionery customer as well as the largest source of imports, exports from the continental United States go largely to countries from which we import very little confectionery. The latest figures (1929) show a total of approximately 16,800,000 lbs. of candy (excluding prepared chocolates) with a value of \$2,856,783 exported from the U. S. Of this amount 3,745,943 lbs. went to the United Kingdom and about 5,800,000 lbs. to Porto Rico, Hawaii and the Philippines. These four customers accounted for almost 60 per cent of total exports, the remainder being distributed among a large number of countries. Canada came next in order and Venezuela and Colombia were the best customers in South America. Total exports of all confectionery (including prepared chocolate) in 1929 were over 21 million pounds with a declared value of over 4 million dollars.

The subject of imports and exports is one of increasing importance to the candy industry and it is highly desirable that the tariff be adjusted in such a way as to be of greatest net benefit to the industry. It is a subject much more complex than may appear on first thought. We will keep our

readers fully posted regarding further developments of the Tariff Commission hearing.

Lessons from the Chains



HERE'S a reason why Chain Stores, taking them as a whole, acknowledge a lively interest in candy today. Candy is a money-maker for them—one of their star profit-performers. In several of the variety-goods chains candy produces from 12 to 15 per cent of the total volume of sales. That makes it just about as valuable to them as Tom Thumb golf has been to the owners of vacant city lots.

A candy manufacturer attending the recent convention of the National Chain Store Association in Chicago would have heard many interesting views expressed. From them he might have gained some valuable ideas concerning the most effective ways for him to merchandise his output. For the unbiased observer must acknowledge that the chains know how to get people into stores and how to make it possible for them to buy quickly and easily. The

chains have kept their noses close to the merchandising grindstone. They have not always perceived so clearly as at present the necessity of looking ahead and trying to anticipate events that might affect their welfare.

Today there is much scurrying about in the chains' camp to halt the punitive expeditions starting out against them in so many state legislatures. But while they are answering the call to arms against discriminatory tax laws the chains are not neglecting their standards of merchandising. For one thing they are more interested than ever in selling what the consumer wants rather than in merely selling low-price, nondescript merchandise. Take candy as an example. One still finds chocolates at 10 cents a pound but some of the more alert chains are displaying 80-cent candy prominently and selling it. 40-cent fudge gets a bigger share of the spotlight today than the 20-cent kind. There was a time when the main attraction of the chain store was its low price. No one looked for quality there. Naturally, a good many people didn't like to be seen shopping there. Those days are passing rapidly.

It was interesting at the chain store convention to hear the value of "loss leaders" questioned. The "loss leader" has always been considered one of the chain's keenest merchandising weapons. Many of us on the outside, have never been able to understand the logic of offering candy at loss-leader prices, since candy is an impulse commodity. There may be profitable strategy in selling staple commodities such as sugar, bread or coffee at prices which yield no profit. These are bought frequently. They are shopped for rather than bought on the spur of the moment because of attractive display. They form the base of the pyramid. Candy is the apex. That the chains themselves have started wondering whether or not "loss leaders" serve any useful purpose is, we think, significant.

Finally, the chains are beginning to show concern over the prosperity and dependability of their sources of supply. Manufacturing is one business. Merchandising is another. To merchandise with any hope of permanent profits, the chains must buy from the manufacturer and offer to the public values that are good enough to produce repeat business. They realize that

the manufacturer must make money or the chain store cannot. And for that reason, there will be in the future, less forcing down of prices to levels where the manufacturer's profit disappears. Men in the candy industry who are going somewhere will watch the chains. They can teach many a valuable lesson.

Sweetest Day Hits New High

*I*N these days of lower skirts, lower market quotations and still lower morale on the part of the shock troops of business it is refreshing to discover one example of resistance to the downward trend. Sweetest Day gives every indication of hitting new high marks in enthusiasm and accomplishment this year.

Countless people in more than 200 cities will find themselves happier on October 18 because someone has been thoughtful enough to make their day sweeter with candy. One guess is as good as another as to the amount of candy that will be sold. It will be enough, we hope and believe, to justify fully the time and hard work that a few leaders in the industry have given. And let it be emphasized in these columns that pecuniary gain has not been their only motive. When a bit of sunshine and happiness is brought into the lives of shut-ins, children in orphanages and inmates in homes and hospitals, when unselfishness and consideration for the feelings of others are sought out and in a small way rewarded—then the industry need harbor no feeling other than honest pride in Sweetest Day.

Radio will have a big part this year in the promotion work with Nunnally's, Luden's, New England Confectionery Company, Green Bros., and others sponsoring broadcasts. This year for the first time several chain store organizations have shown a desire to co-operate. That in itself is an encouraging sign. Viewed either from the angle of sentiment or business Sweetest Day is right. May it pay well-earned dividends in happiness and dollars this year and for many years.



Photo P. Daudrix, Sarlat.

Magnificent walnut tree in full bloom. This tree produces the so-called "Cornes" walnuts. Note the other walnut trees in the background, giving a good idea of the method of planting walnut trees at irregular intervals, along the roadside. This is done in practically the entire Bordeaux district.

The Importance of Walnuts

No. 3—Nutmeats

By Hermann R. Habicht

Wall nutmeats, the walnut is in many ways the most interesting. Its flavor is piquant and distinctive; there is a grade for every purpose and to suit every purse; it is used in a great variety of products: bread and cake, pastry, candies of all kinds, salted nuts, ice cream, sundaes, salads and desserts; it is sold in thousands of grocery and chain stores throughout the country for home consumption.

In a fairly normal year, with prices reasonable and the quality good, this country has consumed as many as three hundred thousand

cases of imported shelled walnuts of fifty-five pounds each—a total of sixteen and a half million pounds. With a pound averaging 200 walnut kernels, the total consumption here has reached the stupendous figure of over three billion walnut halves. I have often been asked during my visits in the French walnut producing sections, what becomes of all the walnuts shipped to America. My answer has always been: "I don't know, but somehow or other they must be eaten."

There is practically no consumption of walnuts in France—the inferior qualities are pressed for an excellent salad oil; the average

Frenchman is quite unable to understand our voracious appetite for walnuts. No other country eats as many walnuts either in the aggregate or per capita as the United States. True, consumption in England, Scandinavia and Germany is increasing; while Canada, with food tastes and habits much like our own, imports very considerable quantities. But it is the American housewife who really pays the taxes and buys the clothes of the French, the Chinese, the Italian and the Balkan walnut grower; it is she who has made the shelled walnut trade as important and extensive as it has grown to be.



Two wagon-loads of walnuts in the shell, arriving at one of the larger plants.

Historically, little is known about the walnut tree except that it is, like the almond tree, a native of Persia, from whence it was probably brought westward to Syria and Greece by Alexander the Great, and somewhat later, during the Roman period, to Italy, France and Spain. It must have reached China during the period of the great Khans, whose empire reached from the Mediterranean to the China Sea, and under whom agriculture and trade prospered greatly. It came to California during the last century and has flourished there under the intelligent and scientific direction of various governmental boards. Thanks to the educational and research work done there by the State, by the University, and by the growers themselves, the most modern methods of production and cultivation have been developed and generally adopted.

New Plantings Inadequate

Nevertheless, France continues to be the largest individual producing country. Walnut trees thrive in the entire southern half of the country, and especially in the southeastern

and southwestern corners. It is almost entirely a case of small scale production, often even quite incidental. There are countless small and medium sized farms, but practically no large orchards. Often the trees grow along the roads, at the edges of the farms, or scattered among other crops. Thousands of farmers have only a few trees each.

For many years the French Government and the walnut exporters have been endeavoring to educate the growers to adopt more up-to-date methods of cultivation, grafting, trimming, spraying, fertilizing and harvesting, but so far their efforts in this direction have met with scant success.

Peasants, the world over, are naturally conservative; this is probably truer of the French farmer than of any other. His needs are moderate. He has some rentes or other securities. He is quite content to live without a Ford or a radio. If a walnut tree dies, its lumber will fetch an astoundingly high price for furniture or gunstocks. Many thousands of good trees were sacrificed to the war—and never re-

planted. I have been told that new plantings throughout France are even inadequate to replace the trees which pass beyond bearing age or die every year. Certainly every indication points to a stationary if not actually declining production of walnuts in France.

"Exotic" Countries Bolster Production

The deficit is being made up by increasing exports from other countries, chiefly China and the Balkan States, but also Spain, Italy, Asia Minor, and, during the last few years—via France—Russia. Walnut trees have grown in these countries for centuries, and some walnuts, in the shell and shelled, have always been exported. But improved means of transportation, new railroads, new and better roads, more motor trucks, improved steamer facilities, and an ever increasing knowledge of the requirements of foreign markets on the part of middlemen, brokers and exporters, have made it possible to put constantly increasing quantities of walnuts

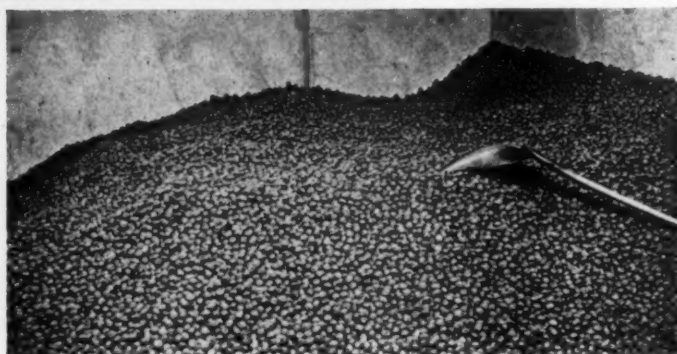
THE IMPORTANCE OF WALNUTS



Walnuts in the shell being weighed and given out to the women for shelling. Baskets used are typical for the entire industry.



A stock of walnuts in the shell, dumped in a dry loft for airing, curing and drying. The nuts are frequently shoveled to prevent deterioration.



from these so-called exotic countries on the world market.

It has been a slow and often costly growth. Walnuts, both shelled and in shell, are a most dangerous article. Prices fluctuate extravagantly and apparently without justification, owing to a very large speculative element in the trade, and to the lack of any worthwhile and really reliable statistics. Walnuts deteriorate quickly if improperly cured or stored.

Not only do flavor, size, shape, meatiness and country of origin play a part in determining value, but color is of the greatest importance. Bright yellow meats have often sold at a discount of twenty or twenty-five per cent under so-called standard light meats, from which they have differed merely in appearance. Unlike almonds, filberts and other nuts which can be stored in the shell in ordinary storage for several seasons in the region where they are grown (and elsewhere in cold storage), walnuts will not keep satisfactorily from season to season, even under the most favorable storage conditions.

Once new walnuts appear on the market, whatever carryover of old stock may exist can, as a rule, only be sold at ruinously low prices. But new walnuts do not appear on the market in France much before early October—in most other countries even later—and new supplies never reach America in any substantial quantities before the middle or end of November, quite too late for the

heaviest consuming months, which account for possibly half the total American consumption (September, October and November, for Halloween, Thanksgiving and Christmas).

Where the Gamble Comes In

Since new nuts can never fill but a small portion of this demand, it is necessary to carry over, either in the country of production or in America, large quantities of shelled walnuts to meet the heavy fall requirements. Owing to the inadequate and generally unsatisfactory character of the storage facilities available abroad, the bulk of the fall walnuts are imported in the spring of the year and carried over in cold storage in America. Many large buyers, realizing that, as a general rule, shipments made from abroad during the early months of the year are best in quality, and that frequently the lowest prices for the season prevail at the same time, cover their

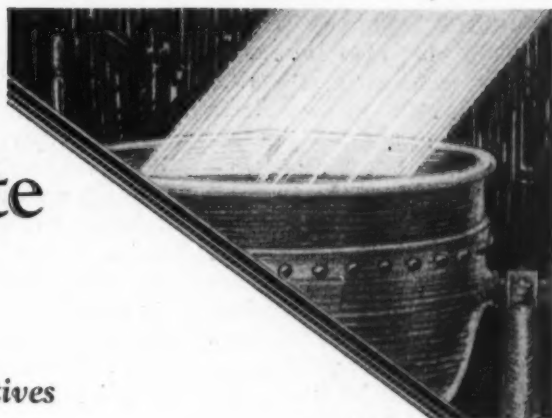
total annual requirements during the year's first quarter, and carry the nuts themselves for their holiday trade.

Your foreign farmer and exporter knows perfectly well the uncertainties between spring supply and fall demand which offer such excellent opportunities for speculation, for each year the realizable price depends upon the carryover abroad and in America, upon the size and timeliness of the coming crops, and upon the uncertain demand for the holidays here. Thus if indications point to a scarcity of nuts and a possibly higher market, supplies are withheld abroad; if the new crop prospects are good and indications are that lower prices will prevail, large quantities of previously invisible and apparently non-existent walnuts are suddenly brought to light and unloaded for whatever they will bring.

(To be continued)

Austrians Irradiate Chocolate for Health

Treated Product Found to Aid Consumptives



Word has been received from Vienna of a method of irradiating chocolate to increase its healthfulness and food value. The following signed release from the discoverers, Drs. Ried and Krasso, comes in answer to the editor's request for data for the American Confectionery Industry:

DR. KRASSO and I received your letters of the 6th instant. I take the liberty of answering you in the name of Dr. Krasso and also in my own name.

The scientific publications which you mention were published in the Wiener klinischen Wochenschrift No. 27 of the year 1929. It is true that our observations are new in this field for the reason that up to the present no scientific research work has been carried on in connection with irradiated chocolate; at least, let us say that no investigator or research worker has reported as to such research work. Also, up until the present, a number of facts to which we have referred in our work, had been unknown.

During the tests which were carried out by Dr. Ried in connection with the feeding of irradiated foodstuffs to rats, it was shown that certain food-

stuffs, especially chocolate, when they had been exposed to rays of certain wave lengths, were greatly improved in food value and in the extent of their utilization by the animals.

Vitamin D Formed by Ultra-Violet Band

In this connection the important discovery was made that it is immaterial with what kind of rays and with what intensities the foodstuffs in question have been treated. The wave lengths of the rays commonly called ultra-violet rays range between 3,900 and 100 Angstrom units, in which connection most of the investigators up to the present have assumed that that part of the ultra-violet ray range which is most effective for activation lies around 2,800 Angstrom.

Dr. Ried has now found that the optimum wave length for the effective irradiation for various foodstuffs differs greatly, and that by irradiation with rays of unsuitable wave length, not only is activation not obtained, but there even takes place sometimes an "inactivation" of the irradiated substances. It has been previously noticed that, for example, cod liver oil which, as is well known, contains an ample supply of vitamin D, after

irradiation with ultra-violet rays, frequently loses some of its effectiveness instead of acquiring, as had been expected, a more intensive action. It required difficult and extensive work and tests to ascertain the correct method of irradiation for individual foodstuffs, especially chocolates and candy. Finally, however, the investigations were fully successful.

Formation of Other Growth-Exciting Substances Indicated

If, for example, chocolate which had been irradiated by Dr. Ried's process (further details with regard to the process cannot be disclosed as it is desired to protect the inventive secret) was fed to rats. Within six weeks these animals increased in weight to the extent of 533 per cent while control animals to which ordinary chocolate had been fed during the same period showed only 344 per cent increase.

The question as to the cause of the increase in the food value of the irradiated chocolate has not yet been fully cleared up. That it is due only to the formation of Vitamin D is improbable. As a matter of fact, chocolate contains very little of the Ergosterin which enters into question as Pro-vitamin. Even though this

AUSTRIANS IRRADIATE CHOCOLATE

Ergosterin contained in the chocolate is also activated (namely, converted into vitamin), it is still not possible to ascribe the remarkable success obtained in the feeding experiments solely to these small quantities of vitamin. It is quite evident that other growth exciting substances are also being formed in the chocolate which up to the present time have not yet been explained or become known. Furthermore, there is one circumstance of importance which otherwise plays an important role in the manufacture of chocolate.

Constipating Effects Overcome

During the manufacturing process, cocoa and chocolate mass are subjected to various fermentations. These fermentations are accelerated by Dr. Ried's irradiation process. Because of this, the chocolates thus irradiated are imparted a mild rounded taste and by converting the tannic acid, also lose the disadvantage inherent in so many kinds of chocolate; namely, their constipating and digestion-arresting effect. Besides the conversion of tannic acid, there also takes place a more intensive acceleration of the inverting of the cane sugar

or beet sugar added to the chocolate.

This invert sugar, which consists of Dextrose and Levulose (fruit sugar) and which is otherwise only formed in the conche, on the one hand contributes to the mild, fine and not excessively sweet taste of the irradiated chocolate, while on the other hand, it assists in the easy digestibility and full utilization of the chocolate so irradiated.

Tubercular Patients Improve

In connection with Dr. Ried's animal tests, Dr. Krasso has tested the irradiated chocolate clinically at the IV Medical Division of the "General Hospital" on a larger scale in connection with different kinds of diseases. He started with the idea that chocolate might be of special value in connection with diseases which cause a consumption of the human body. As a matter of fact, Dr. Krasso succeeded in obtaining remarkable increases in weight by the use of irradiated chocolate in connection with patients suffering from Cachexia, especially in the case of certain conditions of phthisis (pulmonary tuberculosis, or consumption) in connection with which we had not been able to

obtain any success by other measures. These patients showed wonderful improvement in this direction. It was of particular interest, however, that Dr. Krasso, in connection with his patients, was able to observe an increase in the number of red blood corpuscles, and this to such an extent that patients who had shown no reaction after the customary liver diet, after receiving irradiated chocolate showed a rapid increase of the number of red blood corpuscles. These very encouraging results of the clinical tests induced Dr. Krasso to continue the tests at the Division for Internal Diseases of the Hospital where he is an attending physician making such tests on a large scale and we trust that within a short time we shall be able to publish a number of interesting articles on irradiated chocolate.

We herewith give our consent to you to publish our advices of today in your magazine and remain,

Dr. Ried
Dr. Krasso



Fluidity Control of Chocolate

Part II

By

A. I. C. Went.

A. I. C.—England

IN MY article on "Using Lecithin to Control the Fluidity of Chocolate," I expressly stated the *apparent* viscosity of chocolate, and applied the term "plastic solid" as the nearest definition of chocolate in the molten state. Further, I am aware that plastic solids retain their shape under small shearing stresses, and that part of the shearing force is required to overcome the internal friction of a plastic solid. Also when the stress equals the internal friction, the substance is said to be at its elastic limit. When in excess, the additional stress is used up in producing plastic flow.

As a result of his investigations, Professor Bingham in determining plasticity makes at least two measurements of flow, using different stresses.

De Waele (Journal Society of Chemical Industry, 346, 1923) has contradicted some of Bingham's conclusions. It would appear that the measurement of plastic flow is still in some doubt.

The Viscosity Committee of the Cellulose Division of the American Chemical Society (J. Ind. Eng. Chem., 1164, 1922) states that "... in the strictly scientific sense it is not possible to measure viscosity by the falling-ball method, since cellulose ester solutions are not pure viscous liquids, but really plastic materials in which the consistency depends on the so-called yield value or force required to start the mass flowing, and also on the mobility or ease of flowing after it has once started. The committee does not

feel, however, that the distinction is of importance in a method for general practical use, provided only that it is realized that the property being measured is not true viscosity.

"The main object is to standardize the method, so that different users will use identical conditions, and therefore of necessity obtain close agreement in measuring the apparent viscosity of a given solution."

Although the term "viscosity" is not scientifically correct as applied to chocolate, it is a convenient expression for the comparison of chocolate in the fluid state, for manufacturing purposes.

Probably the increased fluidity of chocolate, by Lecithin, will be better appreciated from the following process details, obtained during large scale production. Considering

Professor Bingham's book on Plasticity advances a number of theoretical objections to the falling sphere method for determining viscosity. The question has been raised whether results comparable to those contained in Mr. Avent's report on lecithin (February issue) would have been obtained on a Bingham plastometer.

It is also suggested that the dip in the curve worked out from these readings may have been due to free soya bean oil in the present commercial lecithin and that this might not be the case if the lecithin were produced in pure form (i.e., without an oil carrier.)—EDITOR.

chocolate bar moulding machines, without lecithin, a chocolate containing 33.5% of fat was required to obtain an even flow of chocolate in the moulds.

Using 0.4% of the lecithin compound, a similar result was obtained with a chocolate containing only 27.5% of fat.

Again, a chocolate used for machine enrobing, in order to give a thin coverture, required 37% of fat.

A thin coverture, with a superior gloss, resulted from the use of a chocolate containing 29.4% of fat and 0.4% of lecithin compound.

The Soya-Bean-Oil Constituent

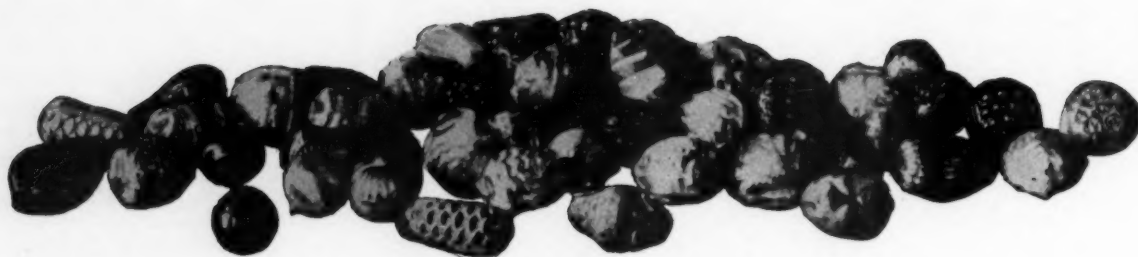
The suggestion that the 40% of soya-bean-oil contained in the lecithin compound is related to the dip in the curves is rather surprising, since if the soya-bean-oil is responsible for the increased fluidity, one would expect the chocolate to become more and more fluid, but quite the contrary takes place. With increasing additions of the lecithin compound the fluidity decreases.

Some years ago cheap chocolates were made containing Arachis Oil (pea-nut oil). The effect of this oil on chocolate can be taken as very similar to that of soya-bean-oil. The chemical values are closely related.

The total fat contained as much as 6.6% of Arachis oil, but in order to obtain satisfactory fluidity for the moulding machines, the fat content was made up to 33.5%, i.e., 2.2% of the total weight of the chocolate was Arachis oil.

In this case, if at all, the effect of a liquid oil on chocolate fluidity would have become apparent, but from the amount of fat required it is readily seen that it had practically no influence in that direction.

(Continued on page 65)



Why Color Candy?

By J. A. AMBLER

Bureau of Chemistry, U. S. Dept. of Agriculture

Now we have a new name for the man who colors candy. He is a "psycho-physiologist". He is working on human reactions and the human reaction which interests him most is appetite. Mr. Ambler tells how candy judiciously colored influences a person's appetite and helps ring up sales on the cash register.

THE practice of artificially coloring confectionery has, in time past, been subjected to opposition on the part of many for the dual reasons that the color may conceal inferior qualities or even spoilage of the article, and that it may be harmful to introduce into the digestive system foreign artificial products such as the coal-tar dyes with which the goods are tinted. Since the pure food laws have removed the cause for apprehension in the case of the former of these objections by specifying that artificial color must not conceal damage or inferiority of the product, and have also removed the danger of physiological damage by the dyes themselves by specifying that only those dyes may be used which have been proved to be harmless, the use of colors in confectionery has come to be expected and even demanded. Everyone knows that attractively and appropriately tinted candy has a greater appeal to the public than uncolored goods. This is universal experience, and there must be some good, underlying reason for it, connected in some way with the physiological functions of digestion and assimilation.

In discussing the effect of any ar-

ticle of food, or of any substance used in food, on the digestive functions, it is necessary to consider the question from the viewpoints of two distinct types of stimulus: first, that of physiological action on the digestive tract whereby the activity of the glands and muscles is either stimulated or checked by direct contact with the food or its ingredients; and second, that of psychological or mental action on the organs whereby their functions are influenced indirectly by sensations derived through the nervous system from one or more of the five senses. In many cases it is almost impossible to decide which type of stimulation occurs. This is particularly true when an ingredient has a distinct taste or odor, for the senses of taste and smell are so closely associated with the activity of the salivary glands, for example, that it is all but impossible to eliminate the effects of indirect stimulation.

Influence of Color Psychological

In the case of the coloring matters used in confectionery, all but two are odorless and tasteless, and differentiation of the type of stimulus is easy. Of the two exceptions, one, caramel, is also a flavoring sub-

stance. When used where only its colored is desired, its flavor is masked by a more powerful one. Therefore we may with propriety ignore the flavor of caramel in this discussion. The other, naphthol yellow S, has a disagreeable, bitter taste and therefore its usefulness as a color is very limited. In this respect it lacks the prime requisite of a good food color, and with the addition of other yellow shades to the permitted list of food colors, the use of naphthol yellow S has steadily fallen off. Furthermore, the fact that this one food color has a disagreeable taste in no way upsets the following arguments and conclusions.

Considering first the direct physiological effects of color in confectionery, it is easily seen that there can be practically none. The amount of stimulating agent, as we all know from every day experience, governs the extent of the physiological reaction. The quantity of pure dye in a piece of candy is infinitesimal. If isolated from the candy, the particle of dye would barely be visible under a microscope. Therefore, while it is impossible to say that the small amount of the dye present is absolutely without direct action on

the digestive system, it is safe to assume that any direct influence on the activity of the organs or glands must be very small indeed and will probably be offset by indirect nervous stimulations coming from the senses.

Sense Organs Affect Digestion

The effect of impressions received through the sense organs on digestion is well known. Perfectly wholesome, easily digestible food, if taken while under adverse physical or mental conditions, may remain totally undigested for hours. This is due entirely to the cessation of the flow of fluid from the digestive glands brought about by fear, worry, disgust, vexation, annoying sounds or sights and other emotions provoked by nervous reaction to unpleasant external circumstances and environs. Conversely, even food hard to digest is often assimilated without any trouble if the surroundings are attractive and every effort is made to promote a feeling of happiness, cheer and well-being. These associations of outward impressions with digestive activity are well known to everyone who prepares or serves food for others. The tray of the sick one is made as attractive as possible with clean linen, pretty dishes, bright glassware, the best silverware and the freshest flowers, to "tempt his appetite." The most popular public dining places are the ones where not only the food is good, but the service and surroundings are the most harmonious and attractive, so appointed as to "coax the appetite."

The use of color in confectionery is another manner of tempting or coaxing the appetite by means of an appeal through the eye. This type of appeal is purely anticipatory in character, but is, nevertheless, of great importance. The eye notices an attractively colored piece of confectionery and immediately associates with it a taste sensation which sets up a desire to eat it. The appetite is awakened and with appetite comes increased activity of the salivary glands in anticipation of pleasing sensations during and after the eating of the delicacy so temptingly displayed.

Principles of Color and Taste Association

Throughout the whole of each individual's life and, indeed, throughout the whole life of the race, this

association of color and goodness of food has been developed until the reaction has become practically instinctive. It is independent of additional sense impressions. The sight of a person cutting a lemon will cause the mouth to water, even if the odor of the lemon does not reach the nostrils, so potent in this case is association of sight with anticipatory taste. And who of us does not remember the compelling urge experienced in our boyhood days, that urge provoked by the



Mr. Ambler Warns Against Violating the "Mental Code"

"We expect that artificially colored candies comply with the requirement that those highly colored be highly flavored Certain colors have come to be instinctively associated with certain flavors The color attracts the eye, and with the tongue is prepared for a certain sensation because throughout the ages those particular colors and flavors have been coupled together by Nature in the natural foods of mankind"

We must guard against violating this mental code!



sight of apples growing on our neighbor's tree? Oh, boy! It was not necessary to smell their aroma. Just the sight of them was all that was required to cause complete forgetfulness of certain lessons we were supposed to have learned in Sunday school, or possibly in the woodshed as the result of former similar urges. If Adam had ever been a boy, Eve's participation in the famous orchard scene would have been entirely needless, for he would have known all about those apples long before he would even have noticed her.

The use of color in confectionery is based on this principle of exciting the appetite. Certain colors have come to be instinctively associated with certain flavors. Thus an orange color anticipates orange flavor; pale green is associated with lime or pistachio, depending on the type of candy; various shades of red indicate cherry, strawberry, raspberry or peppermint; purple indicates

grape flavor, and so on. The color attracts the eye, and the tongue is prepared for a certain sensation, because throughout the ages those particular colors and flavors have been coupled together by Nature in the natural foods of mankind, and the mind is satisfied and pleased with the combination.

Violating the Mental Code

If, however, perfectly wholesome candy is colored differently from these age-old associated ways, the effect is disagreeable, and in many individuals, repulsive. The tasting of an orange colored candy and discovering that it is not orange flavor but strawberry, violates the anticipatory appetite and provokes distrust. Distrust is a type of fear, and consequently causes loss of appetite. The result is the probable rejection of the candy as "not good." If eaten, it does not taste good, as it violates the sense of fitness of things. Similar reactions are produced by eating a candy colored purple but flavored lemon. Even in the shades of red we are susceptible to this influence, for to be judged good and eaten with zest, strawberry color must accompany strawberry flavor, cherry color cherry flavor, raspberry color raspberry flavor. All this is no doubt due to the fact that Nature has never produced orange strawberries, purple lemons, or cherry colored raspberries.

This same inherited trait of association works against the use of bright blue in confectionery. Nowhere is a bright blue edible food to be found in Nature. (Blueberries are not pure, bright blue in color.) No distinctive flavor is therefore associated with this color, and in foods it is viewed with suspicion and distrust of the wholesomeness of the food. It is not natural. It suggests the fear that someone has tampered with the food. Now we all dislike the merest suggestion of our food having been handled, let alone having been tampered with, for formerly such tampering indicated that someone had bad intentions toward the consumer. Bright blue confections never can be popular for these reasons.

Depth of Shade Denotes Flavor Strength

Another interesting correlation of associations of color and flavor is that of depth of color with strength
(Continued on page 60)



La Guaya is an important seaport of Venezuela (Port of Caracas), one of the main sources of the world's cacao bean supply.

Conserving Flavor in Cocoa Powder

No. 14—"Chats on Chocolate"

By ROBERT WHYMPER

AFTER grinding cacao nibs, we come to the parting of the ways between cocoa and chocolate.

For cocoa, the liquor has to be pressed to free it of some of its fat which, being about half of the weight of the liquor, is said to be too indigestible for most cocoa drinkers. In actual fact, the pressed cocoa, freed of some of its fat, can be readily ground to a powder and is more easily maintained in suspension when mixed with boiling water or milk, the polite myth of the indigestibility of the fat covering these advantages and a further obvious benefit to the manufacturer who wants the expressed fat badly for making chocolate that has outstripped the demands for cocoa powder.

All sorts of devices have been used for bulk separation of the fat from cacao liquor, simple and hydraulic presses, hot water, organic solvents and centrifugals, but, so far, hydraulic presses, now automatically fed with liquor and automatically discharged, have proved the most satisfactory except for recovery of the fat from waste cocoa and chocolate products.

It is worth mentioning that most countries have some definite idea of what cocoa powder should be, and many of these have some vague legislation on the subject which controls not how much fat must be removed, but the minimum amount of fat that must be left in. So much for the statement that cacao butter is an indigestible fat.

No Excuse for Lack of Chemical Control

But since legislation *does* exist on the subject, and the law requires, for example, a minimum fat-content of 22% for breakfast cocoa, while the manufacturer wants a maximum expression of fat, it behooves cocoa powder manufacturers to watch their product with a close analytic eye both to avoid conflict with the law and to secure at the same time maximum expression of the valuable cacao butter. This is but one direction in the manufacture of cocoa and chocolate where the chemist can prove of real practical assistance, and I continue to marvel that so many cocoa powder manufacturers, for example, are prepared to take a long risk by over-pressing, on the one hand, and to throw away expensive

cacao butter by insufficient or uncontrolled pressing on the other, by failing to have their products scientifically controlled in the factory. If such a process were highly involved, deeply scientific, or very expensive, one could understand negligence or apathy on the part of cocoa and chocolate makers to bigger and better business. But the existence of such a simple apparatus and procedure as that devised by Dr. Gephart, to quote the best, leaves no excuse for the smallest cocoa and chocolate manufacturer to neglect his duty for fear of the awful words, "chemical control."

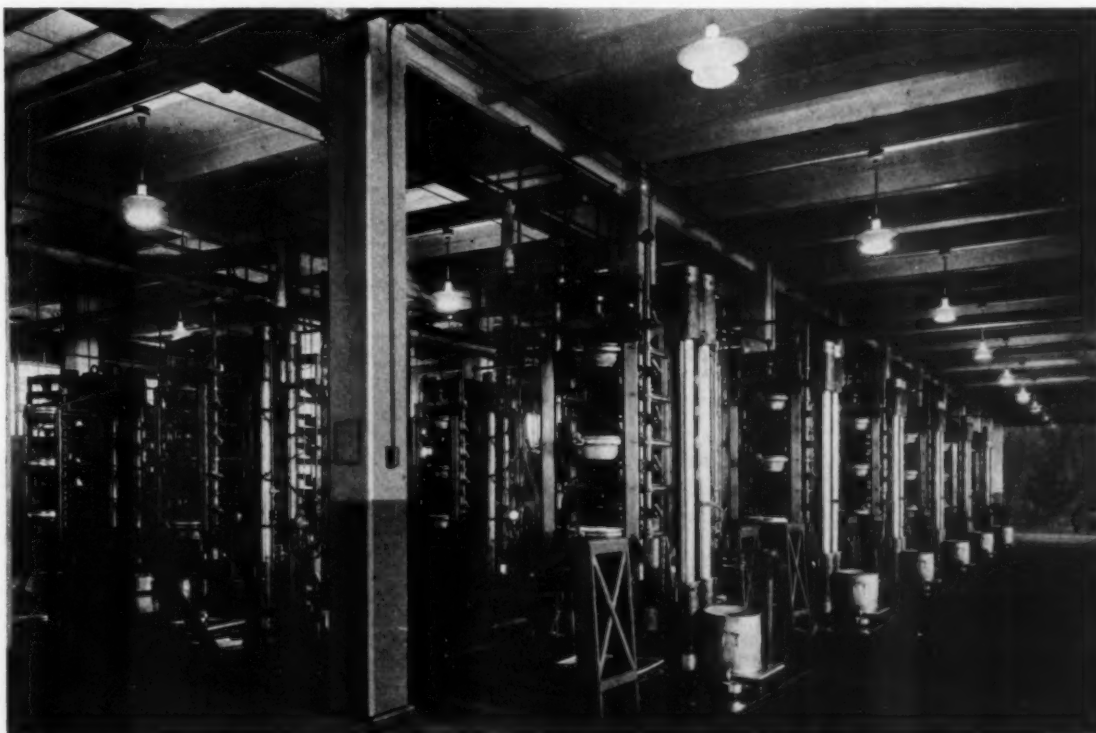
We have already said that bulk cocoa powders are a drug on the market, and we have given as the reason the low grade of cacaos generally used, firstly, because the manufacturer wants the fat, which is practically as good from one grade of bean as another, and, secondly, because low-grade cacaos are the cheapest. This has resulted in bringing all but the well-recognized, good standard cocoa powders into disfavor with the cocoa drinking public. The inevitable circle is thus complete, the public following the manufacturer, the manufacturer following the public, until the rut

worn is so deep that neither seems capable of breaking away.

Huge Market for Better Cocoa Powder

Yet there is a huge field in America today for good cocoa powder or cocoa powder products, dressed up, may be, as soft drinks in bottles, or fancy drinks sold over the soda fountain. Certain it is, however, that no one who likes the flavor of cacao will patronize, or even sample twice, many of the concoctions sold today. The writer himself frequents soda fountains in this country and always takes a cocoa or chocolate drink, but it has to be admitted that too many of these soft drinks are nauseating and most of them only faintly reminiscent of cacao. One wonders what is the real secret of the sales of these drinks. Is it that the American people will put up with anything without complaint, so long as it is cold enough to freeze out the flavor? Or is it that these low-grade products are actually liked? Or, again, are the people forced to take what they pay for on the "take it or leave it" plan, which has been the damnation of the English export business? It has always been stated that the American was free from this gross

(Continued on page 72)

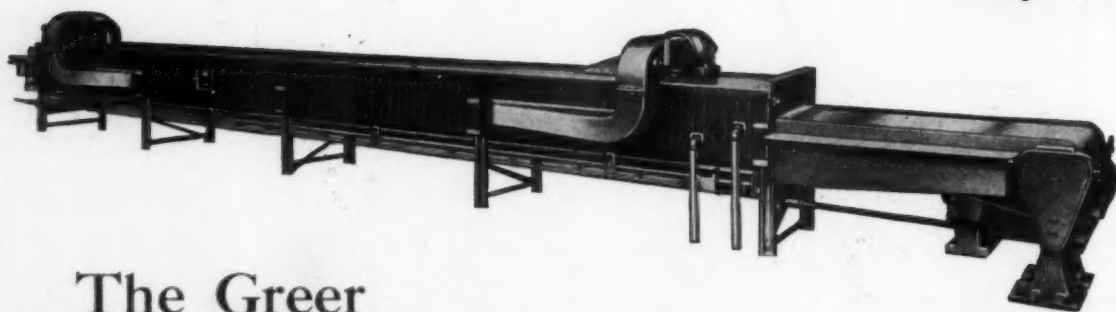
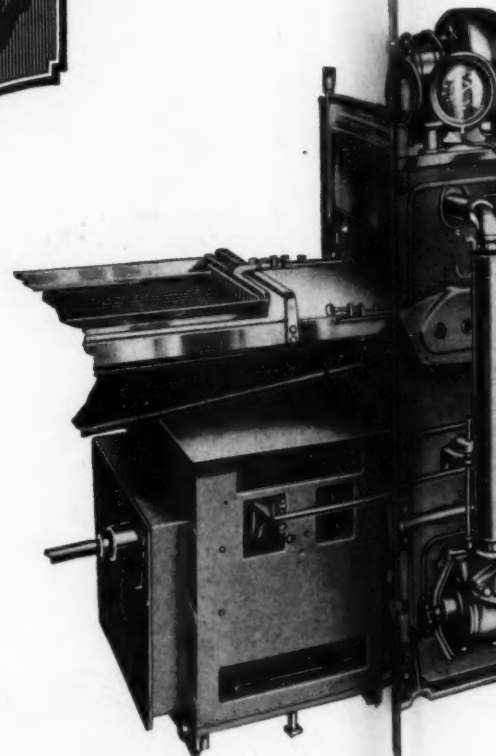


Automatic, hydraulic presses have proved most satisfactory in the separation of fat from the cocoa liquor.



"CLOTHES"

If you are really interested in producing a high quality line of chocolates without sacrificing your big production then a *Greer Coating and Cooling Unit* is your logical equipment.



The Greer Cooling Tunnel

Sectional Steel or Cloth Belt Type
Equipped with or without Refrigerating Coils

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Manufacturers of Confectionery
Machinery that Pays Dividends

119-137 Windsor St. CAMB
LONDON: BRACK & CO

THES DON'T MAKE THE MAN"!

Neither does the coating "make your candy,"—but, like good clothes it makes a good impression.



The Greer Standard Coater

Good clothes have helped many men toward success when poor clothes would have spelled failure.

"It pays to look neat" applies to candies as well as individuals!

Your candies will possess real appeal if they look neat. If the quality is good repeat sales will follow. The quality is "up to you," but the appearance is "up to your coater." **You** will take good care of the quality, but what of the **coater**? Is it capable of producing high quality candies? If it is a GREER, your answer is "yes" and so you do not need our help.

If it is not a GREER, you are operating under a tremendous handicap. When the appearance of your candies has so much to do with their sale, can you afford to continue to use old or inefficient coating equipment?

May we have the opportunity of discussing your coating problem with you? You will be under no obligation and it may mean increased profits for you.

EE COMPANY

urers' Confectioners'
y the Pays Dividends

CAMBRIDGE, MASS.
BRACK & CO., LTD.

Part I

COLLOIDS have come in for a great deal of discussion in a number of industries, and it will probably be to the interest of those engaged in the candy industry to hear more concerning the relation which colloids bear to candy. The word "colloid" is derived from the Greek "kolls," meaning glue. Colloids are the gummy, sticky, formless substances of nature in contradistinction to those which are crystalline. Substances such as sugar and ordinary salt tend to separate from water solutions as crystals of well-defined geometric form. The shapes and general arrangement of crystals run the gamut of almost every conceivable geometrical form and combination, and each substance, for instance cane sugar, always tends to assume the same geometrical form when separating from solution. Some substances also may be either colloidal or crystalline, depending upon circumstances. Our present knowledge of colloids, which is essentially a new understanding of old facts and observations, has become a powerful aid to controlling the behavior of colloids in manufacturing operations.

The candy industry uses both colloidal and crystalline materials, and these, by their inter-action upon each other, determine decisively the structure, texture, and consistency of candy. Knowledge of colloid principles and the behavior of different typically colloidal materials which are suitable for use in candy will consequently assist us to obtain proper combinations of these colloidal and crystalline properties and thus to control the texture and consistency of candy at will. In every industry renewed progress in technology is indicated as soon as knowledge of basic principles replaces rule-of-thumb methods.

A clearer conception of the factors which govern the general structure, consistency and textures of candies will undoubtedly lead to improvements in the attractiveness and stability of candy. To obtain this broader understanding some knowledge of the general nature and behavior of colloidal materials is required.

A few examples applying to other industries will be given to illustrate the application of certain principles and to show how the same principles

apply in apparently unrelated industries and in instances which apparently have no connection with each other.

Some Interesting Colloid Properties

Almost everyone has noticed that when a strong beam of light is sent through what appears to be clear water, the beam instantly becomes luminous. The same effect is observed when a beam of light from a motion picture projector passes through the air of a dusty or smoky room, or when a beam of sunlight is admitted into a darkened room. This phenomenon is known as the "Tyndall effect," because it was first studied by the English physicist, John Tyndall. It is now known that this luminous effect is due to the reflection of light from tiny suspended colloid particles. If a beam of light is passed through water absolutely devoid of these suspended particles, however tiny, the beam is invisible.

Colloids are characterized by the size of their constituent particles. In fact, colloid science is the realm of particles which are neither very large nor very small. Particles such as those of common salt or sugar dissolved in water and present in true solution are too small to be termed colloidal, while suspended particles large enough to settle readily from a liquid are larger than colloidal.

The size of these constituent particles has great influence upon the properties of the colloidal substance. Thus, if gold leaf be reduced to a fine powder and shaken with water, the individual particles, which have the characteristic golden-yellow color, soon settle out from suspension and leave the water clear. However, it is possible to produce a more stable suspension of gold particles of somewhat smaller size which, as a result of the difference in size, are blue instead of golden. If the particles are made a trifle smaller they become crimson, and if

The Wonders of Colloids And What They Mean

By a Member of the M. C. T.

still further reduced in size so that they are just a little larger than atoms, the water in which they are suspended takes on a rose-pink color. This knowledge of colloidal gold has been utilized industrially in producing various tints of ruby glass. This glass owes its color to the multitude of colloidal gold particles which it contains. Silver also shows a change in color with variation in the size of the constituent particles. Massive silver, that is, silver in ordinary compact form, is different in color from colloidal silver such as the colloidal silver preparation "argyrol," used as a germicide.

Another interesting feature of this variation in the size of gold or other colloid particles is that the total surface area of a given weight of gold or other material increases as the size of the individual particles decreases. This increase in the surface area of colloid particles as compared with the same weight of the same substance in more compact form is one very important reason why many of the properties of colloids are different from those of non-colloidal substances.

Now, the size of constituent particles has an important influence upon the texture and consistency of candies of all kinds. It is important that we know how these characteristics may be controlled and modified through the use of colloids such as gelatine, egg albumen, agar, etc.

As candies age, their constituent particles tend to "aggregate," or clump together, thus producing an unattractive, compact, and coarse consistency. The use of colloidal materials for improving the texture of candies and for preventing or retarding undesirable changes is an extremely fertile field for investigation. The information so gained would be a powerful tool for controlling the aging of candy.

Protective Colloids

The "protective action" of certain colloids is of the highest importance, not only in candymaking, but also in other industries in which colloidal

of Colloid Chemistry

ey Mean to Candy

the M. C. Technical Staff

substances are used. A "protective colloid" is one which keeps the particles of another substance in finely divided condition and prevents their aggregating to form large particles. Thus the scientist Zsigmondy found that a colloidal gold solution passed freely through baked clay filters, provided egg albumen was present. In the absence of the protecting albumen, the gold gradually clogged the pores of the filter until the filtrate, at first red, became colorless. The importance of preventing formation of too large particles in the structure of candies is evident, since this causes a granular, coarse consistency. Egg albumen and other similar colloids tend to keep sugar crystals small when candies containing these substances grain, thus preventing as coarse a texture as would otherwise be the case.

The action of protective colloids is beautifully illustrated by the ultramicroscope, which permits us to see the individual colloidal particles of casein in diluted milk and to watch the course of their coagulation by acid or rennin. If, however, a protective colloid such as gelatin or gum arabic is added to the milk before the addition of the acid or rennin, the tiny casein particles continue their individual movements and do not aggregate or coagulate. The ultramicroscope permits one to see by reflected light particles which are too small to be visible under even the highest-power microscope. The ultramicroscope, however, does not disclose these particles directly. By means of an intense beam of light from a small arc lamp, the particles suspended in the liquid under examination are made visible in the same way as in Tyndall's experiments. A small illuminated portion of the liquid is then viewed from above through a high-power microscope and the colloid particles, themselves too small to be seen directly, become apparent by means of the tiny visible light rays which each one reflects.

One of the essential qualities of ice cream is that it have a smooth, velvety texture. That industry has learned the necessity of using a protective colloid to prevent the formation of large, sharp, granular ice crystals. Gelatin is the protective colloid usually employed. Another example of the action of protective colloid is in the formation of gems in nature. Thus the tiny scales stances, Jerome Alexander, a colloid served in many industries. For in present in pearls show the retarding effect of a protective colloid on crystallization. In this case the protective colloid consists of the slime or mucin of the mollusk, without which the calcium carbonate of which the pearl is composed might possibly have crystallized in more or less the same form as marble or limestone, with which it is identical from a chemical standpoint, except for the presence of impurities. colloidal substances is readily ob-

Influence of Size of Particles and Water-Absorbing Power of Colloids

The influence of variation in the size of the constituent particles of parent soap and cast it into two cups, one of which was instantly chilled with ice, while the other was allowed to cool slowly while immersed in hot water. The piece which was chilled quickly was transparent, and on examination with an ultramicroscope showed much smaller particles than the slowly-cooled piece, which was opaque. After several months' standing, the quickly-chilled soap still appeared clear, whereas the other had large opaque spots. This illustrates the necessity of keeping the size of the particles very small in the manufacture of transparent soaps.

Among the factors which may be utilized to produce this effect are the use of protective colloids and quick chilling. The rate of cooling of the batch often has a very significant influence upon the structure,

texture and general consistency of candies which contain substantial proportions of colloidal substances. Here is a subject regarding which we have very little exact knowledge at present; at least, in its relation to candy of various kinds.

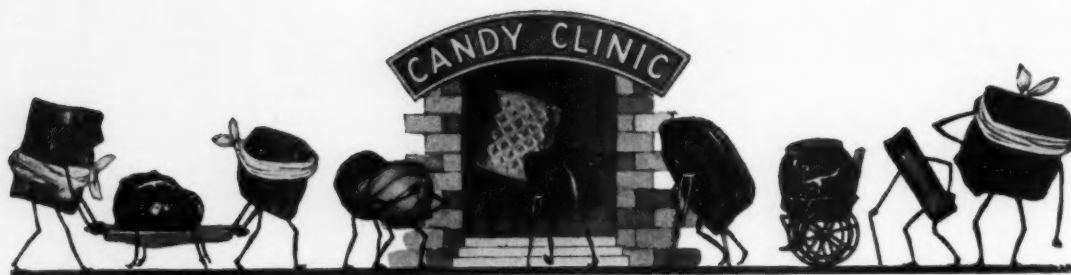
A number of analogies are to be found between technical problems of the baking industry and those involved in making certain types of candy. In China, in 2000 B. C., the art of baking bread was already an ancient one, and probably developed from the observation that fermentation of the dough by wild yeasts improved the quality of the bread. Bread comprises a rather complicated colloidal system including starch, salts, yeast, gluten and other proteins, and often fat and milk. The baking properties of flour, that is, its ability to hold water, and the leavening bubbles of carbonic acid gas evolved by the yeast, depend principally on the physical condition of its gluten. This, in turn, depends on the relative proportions of the several colloids present, and particularly upon the presence of salts which affect their protective relations to each other.

The best results with flour are obtained by using a very small amount of sodium chloride (common salt). Salt has been used from time immemorial, and besides contributing to palatability, it controls fermentation. Hard waters containing sulphates or similar salts harden the gluten; whereas, soft, alkaline waters disintegrate it and destroy its elasticity. Even distilled water yields a sticky dough.

Similar effects may be found in greater or less degree in the case of colloids like gelatin, agar "Jap gelatin," starch, egg albumen, and gums used in candymaking. The ability of the colloidal material to absorb and hold relatively large proportions of water is an extremely important factor in texture and consistency. This property may be modified by the addition of crystalline substances such as salt, cream of tartar, sugar, etc. On the other hand, crystalline substances alone are incapable, under most conditions, of holding enough water to produce a soft and tender texture.

Also, it is not only the proportion of water absorbed by the colloidal substance, but also the tenaciousness with which it is retained that is of importance. The gradual loss of

(Continued on page 60)



The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Each month he picks up at random a number of samples of representative candies. This month it is Miscellaneous Bar Goods; next month it will be Pan Goods. Each sample represents a bona-fide purchase in the retail market, so that any one of these samples may be yours.

This series of frank criticisms on well-known, branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of the M. C.

Miscellaneous Bar Goods

Code 10A 30

Cocoanut Bar—1½ ozs.—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Fair. White transparent cellulose wrapper used. This piece is made up as a number of small cocoanut bonbons covered with a white jacket. The jacket, however, had turned slightly yellow, which affected the general appearance of the bar.

Jacket: Dry.

Center: Good.

Taste: Good.

Remarks: This bar did not look its best. It was probably part of a lot that had been in stock for some time.

Code 10B 30

Cocoanut Bar—1¼ ozs.—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Good. White transparent cellulose wrapper used. This bar is made of cocoanut paste, toasted top and bottom.

Texture: Good.

Taste: Good.

Remarks: Suggest this bar be rolled in fine or powdered sugar as wrapper was stuck fast to it.

Code 10C 30

Chocolate Coated Bar—2 ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Glassine wrapper used.

Coating: Good.

Center: Good.

Remarks: This is a large bar and a good eating one for a 5c seller.

Code 10D 30

Chocolate Coated Bar—

2½ ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Glassine wrapper used.

Coating: Good.

Center: A little dry and short.

Remarks: As a rule this bar is in very fine condition but sample examined was not up to standard.

Code 10E 30

Chocolate Coated Bar—

1¾ ozs.—5c

(Purchased in Milwaukee, Wis.)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Good.

Center: Good. The center of this bar is made up of a vanilla sponge jacket filled with nut paste center.

Taste: Very good.

Remarks: This is a fine eating bar and of good size.

Code 10F 30

Novelty Bar—No weight—5c

(Purchased in a hotel in Chicago, Ill.)

Appearance of Bar: Good. White transparent cellulose wrapper used. This bar is made up of a colored marshmallow to look like a roll. The center, made of a short caramel, represents a frankfurter.

Taste: Fair.

Remarks: This bar is quite original and doubtless will prove a good seller.

Code 10G 30

Caramel-Marshmallow Bar—

1½ ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance: Good. White transparent cellulose wrapper used.

Coating: Milk chocolate.

Taste: Fair.

Center: Made of marshmallow and a thin layer of caramel. Taste, good.

Texture: Good.

Remarks: This bar does not look large enough. Suggest it be made a trifle larger.

Code 10H 30

Chocolate Coated Bar—2 ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Milk chocolate; a little greasy.

Taste: Fair.

Center: Good.

Texture: Good.

Remarks: This is a good eating bar, but would be still better if coating were less greasy.

Code 10I 30

Molasses Cocoanut Bar—

1½ ozs.—5c

(Purchased in a hotel in Chicago, Ill.)

Appearance of Bar: Good. White printed transparent cellulose window wrapper used. This bar is made of molasses cocoanut paste.

Flavor: Good.

Texture: Good.

Remarks: This is a good molasses cocoanut bar.

THE MANUFACTURING CONFECTIONER

Code 10J 30

Toasted Marshmallows— 5 pieces—5c

(Purchased at a newsstand in New York City)

Appearance of Package: Good. White transparent cellulose wrapper used. This package contained five toasted marshmallows.

Cocoanut: Hard and dry.

Center: Marshmallow; good.

Remarks: The cocoanut and syrup used should be checked up. The piece was too tough.

Code 10K 30

Chocolate Coated Cream Bar— 2 pieces—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Good. White transparent cellulose wrapper with white and red band. These are chocolate cream sticks.

Coating: Dark; fair.

Center: Good.

Taste: Good.

Remarks: Suggest a little more coating be used on this piece.

Code 10L 30

Chocolate Coated Bar—2 ozs.—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Milk chocolate; taste, good.

Center: Texture, good; taste, good.

Remarks: This bar looks too small despite its weight. Suggest it be made a bit larger.

Code 10M 30

Chocolate Coated Bar— 2 1/4 ozs.—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Sweet; taste, good.

Center: Texture, good; taste, good.

Remarks: The name of this bar is misleading as it did not contain any pecans.

Code 10N 30

Cocoanut Caramel Bar— 1 3/4 ozs.—5c

(Purchased at a newsstand in New York City)

Appearance of Bar: Fair. White transparent cellulose wrapper used. This bar is made up of a cocoanut paste center dipped in caramel and rolled in cocoanut.

Texture: Good.

Taste: Good.

Remarks: This bar looks too small.

Code 10O 30

Honey Caramel Bar—1 1/2 ozs.—5c

(Purchased in a retail drug store in Boston, Mass.)

Appearance of Bar: Good. Glassine wrapper used.

Texture: Very good.

Taste: Good.

Remarks: This is a good eating bar.

Code 10P 30

Cocoanut Cream Bar—2 ozs.—5c

(Purchased in a retail drug store in Boston, Mass.)

Folding carton used.

Coating: Good.

Center: Good.

Remarks: This is a very fine way to put up bars; makes a neat and attractive looking bar package.

Code 10Q 30

Assorted Wafers—2 1/2 ozs.—5c

(Purchased at a railroad depot in Boston, Mass.)

Appearance of Package: Good. White glassine wrapper used.

Flavors: Good.

Colors: Good.

Remarks: This package without a doubt is one of the largest 5c sellers on the market.



THE CANDY CLINIC

Code 10R 30

Chocolate Bar—1 oz.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Wrapper of silver foil and cream colored printed band.

Taste: Chocolate had an off taste.

Color: Almost white.

Texture: Good.

Remarks: No doubt this bar had been through some very hot weather, judging by the looks of it. This may have been the cause of the off-taste.

Code 10S 30

Cocoa Nut Fudge Bar—1¾ ozs.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Fair. Transparent cellulose wrapper used with printed paper band.

Texture: Good.

Taste: As if it were burnt.

Remarks: The cellulose wrapper was stuck to the bar. They need some checking up as taste is not quite right

Code 10T 30

Chocolate Coated Bar—

1¾ ozs.—5c

(Purchased in a retail drug store in Boston, Mass.)

Appearance of Bar: Good. Printed tinfoil wrapper.

Coating: Good.

Center: Good.

Remarks: This is a good eating bar. Believe foil wrapper should be cut a trifle larger; it just about covered the bar with very little overlapping to give assured protection of the contents.

Code 10U 30

Nougat Bar—1¾ ozs.—5c

(Purchased in a retail drug store in Boston, Mass.)

Appearance of Bar: Good. White glassine wrapper used.

Texture: Good.

Color: Good.

Taste: Good.

Remarks: Suggest the coconut be left out of this bar. Believe it would be a better eating piece.

Code 10V 30

Chocolate Coated Bar—

1⅞ ozs.—5c

(Purchased in a retail candy store in Boston, Mass.)

Appearance of Bar: Good. Red glassine wrapper used.

Coating: Milk; good.

Center: Good.

Remarks: This is a good eating bar.

Code 10W 30

Chocolate Coated Bar—1 oz.—5c

(Purchased at a newsstand in Boston, Mass.)

Appearance of Bar: Good. Yellow glassine wrapper used.

Coating: Milk; fair.

Center: Good.

Remarks: Suggest a better milk coating be used.

Code 10X 30

Chocolate Cocoa Nut Bar—

2 ozs.—5c

(Purchased in a hotel in Chicago, Ill.)

Appearance: Good. White transparent cellulose wrapper used. This bar is made up of chocolate coconut paste, rolled with white short nougat.

Flavor: Good.

Texture: Good.

Remarks: This is a change from the usual bar line.

Code 10Y 30

Chocolate Coated Bar—2 ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Milk; good.

Center: Good.

Remarks: This is a good eating bar and of generous size for a 5c seller.

Code 10Z 30

Nut Bar—1½ ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. White transparent cellulose wrapper used.

Taste: Good.

Texture: Good.

Remarks: This is a good eating bar. Peanuts well roasted. A few almonds used together with some sliced coconut.

Code 10Aa 30

Chocolate Coated Bar—

1¾ ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Milk chocolate; fair.

Center: Had a slight off taste.

Texture: Good.

Remarks: The center needs checking up.

Code 10Bb 30

Chocolate Coated Bar—2 ozs.—5c

(Purchased in a retail drug store in Chicago, Ill.)

Appearance of Bar: Good. Printed glassine wrapper used.

Coating: Milk; fair.

Center: A little tough.

Taste: Good.

Remarks: This would be a good eating bar if the marshmallow were a little more tender.

Code 10Cc 30

Plain Fudge Bar—1¾ ozs.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Fair. White transparent cellulose wrapper used.

Texture: Good.

Taste: As if burnt.

Remarks: The texture of this bar was very good but the flavor might be improved to advantage.

Code 10Dd 30

Nut Caramel Cream Bar—

1⅓ ozs.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good. Packed in tray wrapped in white transparent cellulose. The bar is made up of an opera cream center dipped in caramel and topped off with seven pecan halves.

Taste: Good.

Texture: Good.

Remarks: We have a hunch the cost of this bar needs some checking up.

Code 10Ee 30

Chocolate Coated Bar—

1¾ ozs.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good.

Coating: Milk; good.

Center: Good.

Remarks: This is a good eating bar but looks small.

Code 10Ff 30

Chocolate Marshmallow Bar— No weight—2c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good.

Coating: Milk; fair.

Center: Marshmallow; good.

Remarks: This bar did not have any wrapper; sold from a bulk box. A big bar for 2c!

Code 10Gg 30

Chocolate Coated Bar—¾ oz.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Very good. Gold foil wrapper with a printed glassine wrapper on the outside.

Coating: Milk; very greasy.

Center: Taste fair, but very greasy.

Remarks: This bar, no doubt, will stay in good condition during the cold weather but is not a particularly good eating bar during the summer months unless kept in an electric refrigerator or other cool place.

Code 10Hh 30

Chocolate Coated Bar—¾ oz.—5c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Very good. Red foil inside wrapper. Outside wrapper of printed glassine.

Coating: Milk; very greasy.

Center: Taste good, but very greasy.

Remarks: See remarks under Code 10Gg 30. Same applies to this bar.

Code 10Ii 30

Chocolate Covered Jelly-Marshmallow Bar—1 oz.—2c

(Purchased at a newsstand in Brooklyn, N. Y.)

Appearance of Bar: Good. Silver foil wrapper used.

Coating: Milk; fair.

Center: Raspberry jelly and marshmallow.

Texture: Fair.

Taste: As if a synthetic flavor had been used.

Remarks: At the price of 2c, no criticism can be offered.

THE MANUFACTURING CONFECTIONER

Code 10Jj 30

Chocolate Caramel Bar— No weight—1c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Package: Good. This piece is wrapped in wax paper and then put in a board, open-end wrapper. This piece is made up similar to a chocolate caramel.

Taste: Good.

Texture: Good.

Remarks: This is a fair eating piece of candy and cheap at 1c.

Code 10 Kk 30

Licorice Bar—No weight—1c

(Purchased at a retail candy store in Brooklyn, N. Y.)

This is a chewy licorice piece.

Taste: Good.

Texture: Good.

Remarks: Suggest some kind of wrapper be used on this piece.

Code 10Ll 30

Chocolate Coated Marshmallow Bar—2 ozs.—2c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good. Printed wrapper used.

Coating: Milk; fair.

Center: Marshmallow; a little tough.

Taste: Fair.

Remarks: While this is not a real good eating marshmallow bar, certainly it cannot be criticized, selling as it does for 2c. The bar weighed about 1½ ozs. but the weight printed on the label was 2 ozs.

Code 10Mm 30

Nougat Bar—1½ ozs.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Bar: Good. White glassine wrapper used. This bar is made of a honey-flavored nougat with colored gumdrops mixed through it.

Taste: Good.

Texture: Nougat good; gumdrops too tough.

Remarks: Suggest gumdrops be cooked softer as they did not eat well.

Code 10Nn 30

Peanut Bar—2 ozs.—5c

(Purchased in a retail drug store in New York City)

Appearance of Bar: Good. Printed glassine wrapper used. This bar is made up of grained peanut brittle.

Texture: Good.

Taste: Fair.

Remarks: Suggest peanuts have a higher roast as they did not taste good.

Code 10Oo 30

Nougat Bar—No weight—2c

(Purchased at a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good. White plain glassine wrapper used. This piece is a semi-chewy nougat with colored gumdrops and cocoanut through it.

Taste: Good.

Texture: Good.

Remarks: Suggest the cocoanut be left out as it eats hard.

Code 10Pp 30

Chocolate Coated Bar—¾ oz.—5c

(Purchased at a candy stand in San Francisco, Calif.)

Appearance of Bar: Good. Three wrappers used, wax, goldfoil, and outside wrapper of glassine.

Coating: Milk; good.

Center: Texture, good; taste, good.

Remarks: This bar was in good condition and had a good taste. Same bar purchased in Boston was not fit to eat. Some checking up is needed.

Code 10Qq 30

Chocolate Coated Bar— 1½ ozs.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Package: Good. This package is made up to look like a package of cigarettes. Inside wrapper of silver foil. Green printed band on outside.

Coating: Milk; good.

Center: Light chocolate nougat with thin layer of caramel.

Texture: Good.

Taste: Good.

Remarks: This should certainly be a good 5c seller.

Code 10Rr 30

Queen Bee—1¾ ozs.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Package: Good. Three chocolate sticks of peanut nougat wrapped in white transparent cellulose with red seal.

Coating: Dark; fair.

Center: Taste, fair; texture, good.

Remarks: The peanuts in the nougat were not roasted enough.

Code 10Ss 30

Chocolate Sticks—¾ oz.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Package: Good. Open end carton wrapped in silver foil with yellow band.

Cigarettes: Chocolate; dark.

Taste: Fair.

Remarks: The package is a good idea, but suggest a better grade of chocolate be used.

Code 10Tt 30

Chocolated Coated Mints— 1⅝ ozs.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Package: Very neat but too small. Silver foil wrapper used.

Coating: Bittersweet; fair.

Center: Too soft.

Texture: Fair.

Remarks: On opening this package mints were broken and had started to run. This is not a practical way to pack this type of goods. Also, it appears small for 5c.

Code 10Uu 30

Chocolate Coated Bar— 1¼ ozs.—5c

(Purchased at a retail candy store in San Francisco, Calif.)

Appearance of Bar: Good. Wax wrap-

per used inside. Outside wrapper of printed foil. This bar is made of cocoanut paste dipped in dark chocolate.

Coating: Fair.

Center: Taste, good.

Texture: Too dry.

Remarks: The center of this bar is entirely too dry. Suggest more corn syrup be used. It is not a good eating bar in its present condition.

Code 10Vv 30

Chocolate Coated Bar— 1¼ ozs.—5c

(Purchased at a candy stand in San Francisco, Calif.)

Appearance of Bar: Good. This bar is packed in a chocolate colored folding box.

Coating: Dark; good.

Center: Taste; good.

Texture: Good.

Remarks: This is a good eating bar. Suggest it be wrapped in wax paper before it is put in the carton.

Code 10Ww 30

Chocolate Coated Nut Brittle— No weight—5c

(Purchased in a retail drug store in San Francisco, Calif.)

Appearance of Bar: Too small. Brown printed wax paper used. This bar is made up of a nut brittle coated with milk belmont coating.

Coating: Good.

Center: Texture, good; taste, very good.

Remarks: This is a very good eating bar but entirely too small. Suggest bar be made thinner and larger. Also use a more attractive wrapper.

Code 10Xx 30

Chocolate Fudge Bar—2 ozs.—5c

(Purchased at a candy stand, Ferry Bldg., San Francisco, Calif.)

Appearance of Bar: Good. White transparent cellulose wrapper with blue band. This bar is made of chocolate fudge, nuts and raisins.

Texture: Good.

Taste: Very good.

Remarks: This is one of the best fudge bars the clinic has examined for some time. It is also of ample size.

Code 10Yy 30

Chocolate Marshmallow Bar— 1½ ozs.—2c

(Purchased in a retail candy store in Brooklyn, N. Y.)

Appearance of Bar: Good.

Coating: Milk; fair.

Center: Marshmallow; too tough.

Remarks: No criticism at the price of 2c.

Code 10Zz 30

Chocolate Coated Creams— 1⅜ ozs.—5c

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Package: Unattractive. Tray type of package wrapped in

(Continued on next page)

Eric Lehman Deplores The Candy Bar Business As It Is

IF the present trend continues, it is quite apparent that sooner or later every manufacturer of candy, whether large or small, will be trying his hand at producing candy bars. There seems to be an inescapable attraction to this phase of the business. When a condition of this kind arises, it is inevitable that much merchandise reaches the market which is hardly fit for human consumption. Still other merchandise appears, so excellent, that it is safe to say the manufacturer loses money. These are simply the results of a highly competitive market. Some manufacturers attempt to give added quality, while others resort to greater quantity in their frenzy to win sales. In the one case, unless the manufacturer reduces the size of his bar, which he cannot afford to do under the circumstances, he must forego a profit. In the other case, the manufacturer must sacrifice quality for bulk. Somebody loses no matter how you look at it. Perhaps, the idea of those who are losing money on their better quality bars is to weather the storm until conditions become normal. It is conceivable, however, that some of them will be unable to "weather it" for that long!

This condition is not an exclusive characteristic of the bar business. Many of the package houses indulge in the same sort of senseless competition. The prices at which some of the one-pound boxes retail for sometimes makes one gasp. How can they do it? The answer is they simply can't—and survive for long. To be sure, raw materials are apparently at rock-bottom prices. Some in fact, are bringing lower prices than they have for 15 years or more. But what about labor, selling costs, etc.? Nothing cheap about these! In most cases, they have shown a steady increase. Then consider the free goods and the extra discounts, more of which are being offered today than ever before. The saving in raw materials is soon consumed by these other increased costs and added expenditures. Our serious advice to all manufacturers is that

they check up their costs and do it in a hurry, or there will be fewer manufacturers in business a year from now.

The public is looking for larger bars (candy). That, however, is to be expected. The more they get the more they want. Some of the manufacturers are most accommodating in this respect and the consumer gets plenty for his money. But what he gets is nobody's business! Occasionally he does buy a sizeable bar of fair quality but here again it is a case of the manufacturer losing out. The fact of the matter is size and quality, at the present time, do not go hand and hand. 10c bars might be a logical answer, but not with chain cigar stores selling 5c bars at 3 for 10c and with a grocery chain store selling them at 6 for 19c. Obviously price increases are out of the question.

At conventions we hear leaders in the industry get up and tirade against free deals, price cutting, etc. Their theme is "Uplift the Candy Industry." And what is the result? Packages that look as though they should sell at \$1.00 a pound are selling for 35c and 40c; 5c bars almost given away. Fortunately, some of our more conservative houses have maintained their prices and have continued to turn out goods that do credit to the industry. These houses will still be doing a profitable business long after the others have departed this life. And their tactics are the answer to today's problem.

With the increasing number of manufacturers producing bar goods it is interesting to note its effect upon the retail merchant—or is it the other way around? In either case, the retail man is turning his candy business into a 5c business. Wherever you look, on show cases, or counters, the 5c bars predominate. Why not try to educate this man to increase his unit sales. Get him to devote some of his counter space to small packages, to half and one pound boxes. I have seen a purchaser, buy ten five-cent bars at a time to take home (so he said) to the kids. A customer of this sort

is a prospect for a box of candy. His wife will appreciate this more and everyone concerned, retailer, jobber and manufacturer alike, will make a more substantial profit on the sale. At the newsstand the candy bar is the thing, but the retail store proprietor will find he has put his time to more profitable advantage selling Father a box of candy instead of a half dozen bars.

Just a word about some of the most glaring faults observed in the bars examined for this month's clinic. Wrappers of some of these indicated that they were milk chocolate. Which just goes to prove that you can't believe in wrappers. Some of these coatings only faintly resembled chocolate in flavor. Some of the caramel paste and some of the flavors used were really terrible. Poorly roasted peanuts contributed their share to the general lack of quality in some of these bars. Half roasted peanuts, cheap caramel paste, synthetic flavors, and inferior milk chocolate coatings will spoil the finest bar ever devised. *Avoid their use at all costs!*

Candy Clinic

(Continued from page 53)

white transparent cellulose. Two large chocolate covered maple walnut creams.

Coating: Milk; good.

Center: Maple cream; texture, good; taste, good.

Remarks: Both pieces were broken and had started to run. Not a good looking package.

Code 10AA 30

**Chocolate Coated Fudge Bar—
2 ozs.—5c**

(Purchased in a retail candy store on Long Island, N. Y.)

Appearance of Bar: Good. White transparent cellulose wrapper with small printed seal. This is made of chocolate coconut fudge.

Texture: Good.

Taste: Good.

Remarks: This is a good eating bar.

Code 10BB 30

Peanut Bar—3½ ozs.—5c

(Purchased at a newsstand in Boston, Mass.)

Appearance of Bar: Good. Printed glassine wrapper used.

Texture: Good.

Taste: Good.

Remarks: This is a good eating 5c seller. The weight printed on wrapper is 3½ ozs. but bar weighed 4¼ ozs. It isn't possible to make a profit on this bar. The cost needs checking up.

Department of Commerce Plans Three New Services

TO MEET demands of American trades and industries for constructive government assistance in eliminating avoidable waste in domestic merchandising, William L. Cooper, Director, Bureau of Foreign and Domestic Commerce, Department of Commerce, has announced a reorganization and expansion of the bureau's domestic trade services. Congress has recognized the immediate necessity for improving these facilities by increasing the allotment of funds for domestic commerce work in the 1931 appropriations for the Bureau of Foreign and Domestic Commerce, according to the announcement.

Three New Technical Services Planned

The plan of reorganization and enlargement worked out by Commerce Department officials in cooperation with representatives of manufacturers, distributors, and consumers, proposes creation of three new technical service units within the Bureau of Foreign and Domestic Commerce, to replace the present single division dealing with domestic commerce matters. This, it is stated, will make possible a broadening of the domestic business services now being rendered by the existing commodity divisions in Washington and the thirty-one regional offices of the bureau located in various large cities.

The new units have been designated as the Merchandising Research Division, the Domestic Regional Division, and the Marketing Service Division. All of the work undertaken by these three divisions will have the general objective of promoting stability and reducing distribution costs. Individual projects will be conducted upon the specific request of and in cooperation with trades and industries which can demonstrate both a vital need for such effort and inability to obtain the desired results otherwise.

The Merchandising Research Division will provide practical assistance to American industries which are searching for better methods of calculating the costs of distributing merchandise. This division will be

prepared to help solve specific industrial marketing problems, such as the collection of basic market data on commodity sales, stocks, distribution outlets and methods, consumer preferences.

The Domestic Regional Division will study regional commodity movements, providing basic statistical pictures of the flow of goods in interstate commerce. The development of authoritative information concerning population buying power, distributing outlets and routes, and warehousing centers will be undertaken by the Domestic Regional Division. It will continue research in the fundamental factors of regional markets, labor and materials which influence the migration of trade and industry from one section of the country to another.

The Marketing Service Division will provide facilities whereby the individual manufacturer, distributor, and retailer can obtain definite information and assistance on any details of their particular problems in marketing merchandise. It will serve as a clearing house for information on the distribution of merchandise within the United States and issue periodic publications designed to keep the public informed of the true significance of modern developments in this field.

Dr. Surface to Direct New Projects

Dr. Frank M. Surface, Assistant Director of the Bureau in charge of domestic commerce activities, will have general supervision over these newly created units. The executive personnel will be announced later. National associations representative of all branches of trade and industry, as well as consumers' organizations, will be invited to name leaders in the fields of merchandising to be served by the new units to act unofficially as executive steering com-

mittees so that the work may be kept within the channels of established usefulness.

"It is generally concluded by economists who have studied the subject that there is not less than 8 to 10 billion dollars of waste in the conduct of American business every year," Mr. Cooper says. "There is ample reason to believe that the highest percentage of this waste arises in the field of distribution. Since this burden falls finally on the consumer, the problem of waste elimination is intimately related to the welfare of every American citizen."

The analysis of selling and distributing costs in representative manufacturing and distributing establishments by the Department of Commerce has led to widespread adoption of improved methods in many phases of distribution. Studies of this sort are now being conducted in the field of groceries, dry goods, hardware, paint, confectionery, electrical goods, and stationery, to mention only a few. The Louisville Grocery Survey has been the most ambitious project in this field. In this survey, the ultimate costs and results of practically every type of distribution policy employed by foodstuffs manufacturers and distributors were revealed by close scrutiny of commodity movements to the consumer through 26 selected retail stores.

Similar studies to provide basic factual data to guide business decisions with regard to merchandising and merchandise control, store arrangement, store location, economical warehousing, order assembly, delivery, and other functions of distribution will be carried out by the new organization.

The newly organized Marketing Service Division will continue the operation of a clearing house for all data on distribution research according to Mr. Cooper. One form taken by this activity is the analysis of special marketing problems on which aid is solicited by individual business concerns, bringing to bear upon them a resume of mobilized research data gathered from all known official or private sources.



The New Relation of Manufacturer and Chain Store

By Charles Francis,
Executive Vice-President,
General Foods Corporation

THE purpose of these remarks is to analyze relationships between the packaged food and chain store industries, with an endeavor to sound a keynote of future trends.

Let's go back only a few years. Various commodities were needed to sustain life—the good old ham and egg, oatmeal, bread and potato days. The days when prunes or dried apricots and peaches and rice puddings might be considered delicacies.

Someone had to supply those needs and the food manufacturer did it.

You dished starch from a box—you poured molasses from the spigot—spiked pickles out of a cask, and choked while you doled flour out of an old barrel.

Shelves were full of beautifully attractive plain paper bags, tied with string with loose ends. Barrels were here, there and everywhere. Big boxes of food were open for inspection and taste by other than humans.

What an opportunity for an attractive, enticing business!

But then someone waved a wand and something happened. Starch went into packages, syrup went into cans, milk was evaporated and put into tins. Crackers, coconut, coffee, flour, oatmeal, molasses, vinegar, prunes and the like rushed to the customer and came back bedecked in cloth of texture and color. The old staples had taken on new life. In they came demanding recognition.

That moment started a new era.

What an improvement! But what if the movement had stopped there?

Exploitation of these packages, which were immediately branded, started. New uses were found for these old staples. The consumers' interest in foods became aroused. Demand even for staple items increased. Retailers began to do more

than supply demand. They began to sell.

Then came another stage and a most important one. Our inventive genius began to assert itself on foods. Products came into existence in package form, about which there was not even consumer knowledge, let alone demand. Illustrations are many. I should like to give credit to the men but let the commodities suffer. Corn flakes, shredded wheat, puffed cereals, Postum, quick cooking tapiocas, Jell-O, soups, vegetable oils, delicacies galore, dried milk, salad dressing, soap, and new types of soap, coconut, cake flours, and the like in new forms.

All of this activity was doing what? Creating new wealth, creating new desires. Increasing not only a demand for variety in foods but creating new business for cooking and serving utensils and increasing fuel consumption.

Food manufacturers, and I may say this with modesty because the pioneers are responsible, have to a large degree made the present distributing business possible.

But let's not stop here lest it be thought a plea of support because of past performance.

Food Industries Facing Intensive Period

SO far, only the surface has been scratched. Thirty years from now present methods may be just as antiquated as are those of thirty years ago.

The intensive period is here. Every progressive manufacturer has research departments, bringing to bear on this largest industry the best brains of the scientific world.

In the laboratories of most companies are many new and improved products.

I have but to mention the one phrase "quick freezing" to indicate a possible future trend. Just as millions of dollars, not to mention energy and intellect, have been expended for progress in the past,

so will vast amounts be expended in the development of this idea, which will open new and profitable business for distributors.

No, gentlemen, I make no old worn out appeal. I stand firmly and openly on the platform that the food manufacturers of this country have aided general prosperity, have contributed to the prosperity of their distributors, and that they desire to be judged in the future as in the past only on their current services in which capacity they will not be found wanting.

I furthermore believe that the manufacturers' progress and your progress go hand in hand. Stop this productive activity and on what do you or we base opinions of future development?

Our task, as manufacturers, is more than that of simply putting together a lot of machinery to roll out in a humdrum mechanical way batches of packages. Almost anyone could do that. It far transcends such an operation and enters the realm of creation, education and inspiration. Progress demands such a course.

Ample evidence of this is a daily occurrence. I have here the latest issue of one of our leading magazines. An analysis indicates the following:

Total number of food advertisements 35

Number of food advertisements which have no competitive angle at all and are intended exclusively to encourage the housewife to buy and use more of the class of products advertised 18

Number of food advertisements which have a partly competitive appeal, which are primarily educational and creative of a desire to buy and to eat more food. . 10

Total of the above two classes, in both of which

From an address before Nat'l Chain Store Assn., Chicago, Sept. 29, 1930.

the main purpose is to encourage the desire to buy more food, to prepare more food in the home, and to eat more, and in which the competitive appeal is either entirely absent or is greatly submerged . . . 28

Number of food advertisements that are entirely competitive—in which the appeal is simply to buy my product instead of the other fellow's . . . 7

Here is definite proof that the major effort of food manufacturers today, as it always has been, is not simply to switch a sale from one product to a competing product, but it is to advance the interests of the manufacturer and the food distributor by making the housewives eager to buy, to prepare, and to use more food in the home. The millions of recipe books distributed by manufacturers, the gorgeously attractive advertisements, and the extensive work by manufacturers' demonstrators are most important factors in increasing an interest in cooking and in making it possible for the dealer to supply a constantly expanding market for the ingredients for home cooked meals.

Without Profit Business Is Not Business

The manufacturers, then, are in the broader sense vitally concerned in manufacturing. They are not distributors. They desire, and it is essential, that their products reach the ultimate consumer, but it is not within their province to indicate from whom that consumer should buy.

They of course have keen interest in all phases of the cycle—manufacturing, distribution and consumption. Each is interdependent. The smoother these are geared, the greater the efficiency and the mutual profit from the entire operation.

Business is not business without profit and it is unsound for the manufacturing industry or any other industry to attempt to exploit its products through a profitless distributing system or through a profitable system unless its products make their normal contribution to profits. Loss "leaders," despite a long historical record, have not proven themselves economically sound or of permanent benefit to those persistently employing them.



A Challenge and a Duty

OPERATING a business efficiently is both a challenge and a duty, says Clarence Francis, executive vice-president of one of the most important food-producing groups in the world. "Without profits business is not business," he contends. "Loss leaders have not proven themselves sound or of permanent benefit."

No one class comes into court on that count with clean hands. Definite leadership and cooperation seem essential.

Reestablish confidence, restore profits, exploit products at a profit and much good will follow.

Many, more mutually major problems, have presented themselves which, until solved, reduce efficiency. Should distributors manufacture? Should distributors exploit their own house brands? Should distributors receive extra compensation for this or that function? And many more.

Over-production is recognized as a present-day evil. Increase production further and the old law of supply and demand may take a further toll. History is full of examples of the probable result of such a course. Within our own food industry are some well known striking examples. But it does not stop there. It is quite conceivable that a duplication of distribution might result. The problem of manufacture and distribution by one organization or as a mutual relationship will bear intelligent leadership.

Lack of profit seems to be the root of all evil and that again may be the root of desire for extra compensation. *Buying of business has, I presume, always existed, but the weakness of it is generally recognized. It lasts only until you are outbid. It borders on secret diplomacy which is fast being discarded as antiquated by nations. In our own economic history we are familiar with rebating in many forms. It occurs mainly during the early struggle for existence.*

To leave that question here would not be fair. The theory that prefer-

ences should be demanded on the ground of ability to get them is giving way to a broader conception. Replacing that seems to be a sincere belief on the part of some distributors that manufacturers should recognize in a tangible way differences in efficiency, economies of operation or the value of their service as a supplemental medium. There is considerable confusion in measuring such aids—volume, sales increases, distribution facilities, advertising service, etc., are advanced.

If sound, and the same or better results were to be obtained, manufacturers would prefer to divert to their distributors money which they might be spending in other channels. That would be only common-sense business.

If volume were the gauge, the question would only be answered in part. Pooled or consolidated buying, which could never be fully controlled, would average prices resulting again in ultimately arriving at an even cost basis.

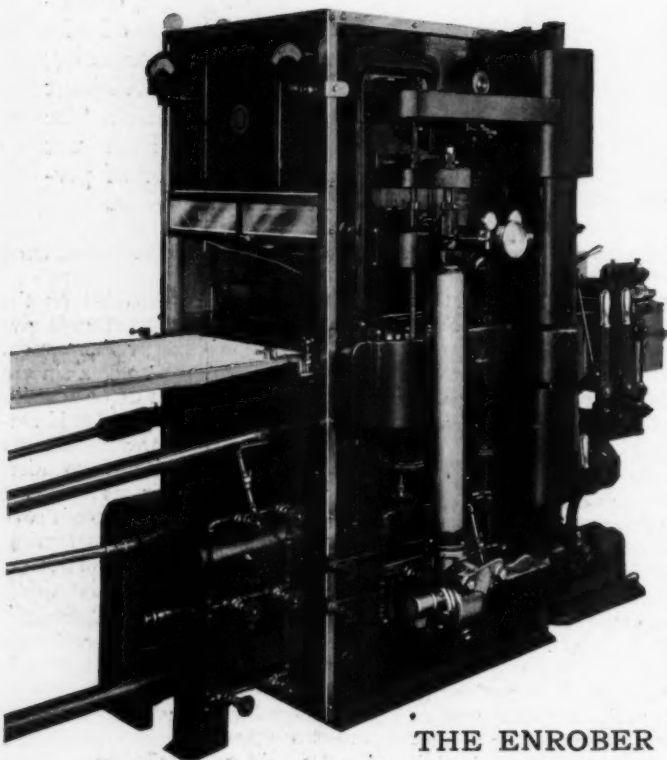
If sales increase is to be the yard stick, the result will be overloading, causing the necessity of turning merchandise into cash with a detrimental effect on profit.

The question of payments because of seeming economies is far from a simple one. It involves a study of the whole structure of selling. It virtually means, when carried to its full length, setting a basic price at the factory, and computing the selling price with each and every sale by not only considering freight and handling costs but each buyer's cost in reaching the point of ultimate distribution. Otherwise the system of averages which accounts

(Continued on page 69)



FOR MANY YEARS...



THE ENROBER

Confectioners everywhere have found our machinery profitable—**AND NOW**—National machinery will make more money than ever before because it is constantly improved. Recently one of the outstanding figures in the candy industry said, "The National Temperature Control is worth twice its cost if it did nothing but keep the Enrober running constantly." **NO STOPS FOR HOT OR COLD CHOCOLATE.** In addition think of the saving because of uniform chocolate temperatures. Always the **RIGHT** amount of coating on your centers and the shine and finish is perfect. And then—the **Detailer**—eliminates tails and legs; no material wasted by small pieces dropping and scattering.

Send for a National Engineer

A DISTINCT ADVANTAGE

is yours if you avail yourself of the experience of a National Engineer. Our staff is constantly on the alert to find more economical ways of producing candy. These men will check over your plant or your problems with you at any time. We have helped many. Maybe we can help you. No obligation incurred. Every day you delay we both lose money.

Send for a National Engineer

National Equipment Company



Springfield, Massachusetts, U.S.A



FOLLOW THE NA

THE FINAL TOUCH ^{AND} APPEAL

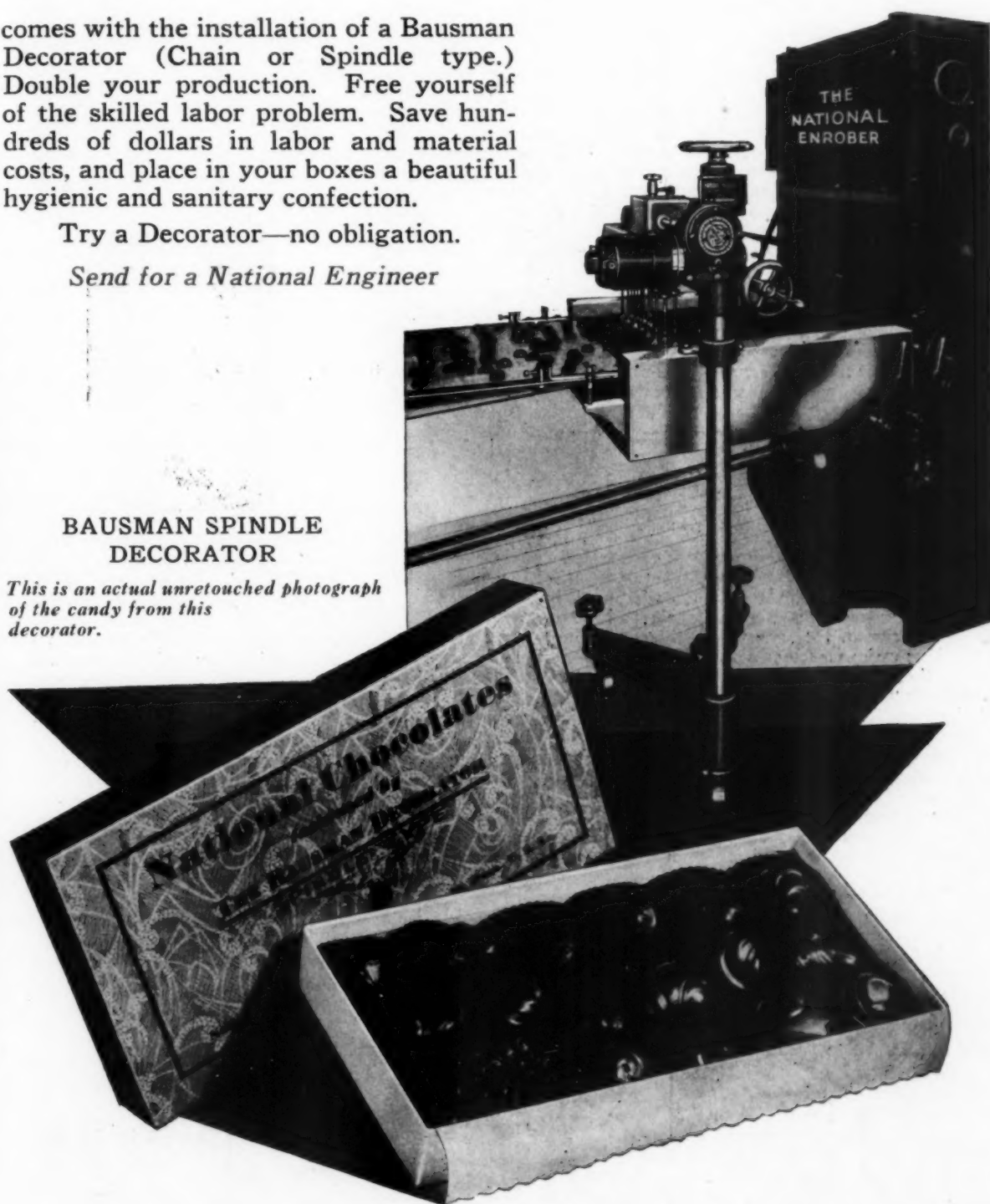
comes with the installation of a Bausman Decorator (Chain or Spindle type.) Double your production. Free yourself of the skilled labor problem. Save hundreds of dollars in labor and material costs, and place in your boxes a beautiful hygienic and sanitary confection.

Try a Decorator—no obligation.

Send for a National Engineer

BAUSMAN SPINDLE DECORATOR

This is an actual unretouched photograph of the candy from this decorator.



THE NATIONAL TRAIL



Why Color Candy?

(Continued from page 43)

of flavor. This again is a direct result of our acquired experiences, both as individuals and as a race. For, in making wine in the olden days, for example, from purple grapes, if more grapes were used for a given volume of brew, not only was the color derived from the grapes increased in depth, but the flavor of the grapes was also increased in the same proportion as the color. If the brew were watered, however, because of scarcity of grapes, the color of the wine was paler and its flavor was weaker. So with all the operations of olden times in which color-bearing foods were used for brewing, preserving or other culinary purposes. The re-

sult is a universal, almost instinctive judging of strength of flavor by the depth of color, so that today we expect that artificially colored foods comply with this requirement and *that highly colored candy be highly flavored, while candy colored in delicate or pastel shades should be delicately flavored.* When we encounter some which do not follow this custom, we again experience the fear either of unnatural tampering with our food or, if the color is too light for the flavor, of undue age of the article which has resulted in fading of the color and staleness, if not actual spoilage of the candy. Our normal reaction is to reject such confections as unnatural and bad.

The Wonders of Colloid Chemistry

(Continued from page 49)

water by evaporation is a very significant factor in producing staleness in bread and, as the candy-maker knows only too well, it is also a decisive factor in the aging of candy. The various factors which influence the retention of water by colloidal substances are of tremendous significance in the candy industry. Systematic investigation of this subject would in all probability disclose a number of ways in which, by the addition of suitable substances, or by appropriate treatment or manipulation, the property of retaining water could be increased and stabilized.

This highly essential property of absorbing moisture may be easily impaired by improper treatment of the colloidal material, especially by overheating. Thus, flour heated for 8 to 10 hours at 140° F. will not make a dough, probably because its colloids have lost so much water that the constituent particles have now approached each other too closely to be separated again by water alone. This is similar to the behavior of gelatin, which loses its solubility on being heated at too high a temperature. The swelling of colloids such as gelatine or the gluten of flour is due to the absorption of large amounts of water. The influence of heating on this property has a very striking application in

the case of egg albumen. The "strength" of egg albumen "whips" or frappes is influenced by ability to absorb moisture and also by the inherent tenaciousness of the albumen. If the albumen is deficient in these properties, it is unable to swell or to become sufficiently emulsified to increase greatly in volume; therefore, the volume test indicates deficient strength. The variation in strength observed in different lots of egg albumen is due to a considerable extent to variations in the time and temperature of drying. The nearer the egg albumen is heated to the coagulating point, the greater the loss of these properties and consequently the greater the decrease in strength.

(To be continued)



R. L. Purdon Advances to New Marketing Post

R. L. Purdon, director of the Candy Distribution Survey being conducted by the Foodstuffs Division of the Bureau of Foreign and Domestic Commerce, has been appointed assistant chief of the Bureau's recently-organized Marketing Service Division. Until his successor is named E. G. Montgomery, chief of the Foodstuffs Division, will supervise those activities which



have occupied Mr. Purdon. S. L. Kederski will complete the cost of distribution analyses now being made. E. A. Flagg will continue to prepare the annual and monthly sales reports supplied to the confectionery industry. G. G. Gaydash and J. H. McCormick will prepare the Division's releases concerning sugar, molasses, honey, confectionery and edible nuts.

"The new work in which I am to be engaged does not entirely remove my official interest in the confectionery survey activities," said Mr. Purdon recently to THE MANUFACTURING CONFECTIONER, "since these are a part of the broad field of domestic commerce work which is henceforth to have my attention. I shall have opportunities for co-operating with the Foodstuffs Division in the furtherance of their work for the confectionery trade. It is unnecessary to add that these opportunities will always be welcomed."

Peter Cailler Kohler Has New Representative

Mr. Thomas J. Smith has been appointed successor to Mr. R. J. Dempsey representing Peter Cailler Kohler Swiss Chocolate Company in Illinois, Wisconsin and St. Louis, Missouri. His office will be at 1319 South Clinton street, Chicago, Ill. Mr. Dempsey is taking a well earned rest.

Mr. J. R. Rice has been appointed Mr. Smith's successor in Iowa.

N. C. A. Plans Golden Jubilee Convention in 1933

**\$375,000 in Pledges for Advertising Announced;
Executive Committee Votes 1931
Convention to Chicago**

PLANS for an exposition and convention marking the 50th anniversary of the founding of the National Confectioners' Association occupied the foreground of discussions the annual Executive Committee meeting of the Association, September 22 and 23, in Chicago.

In the past the Executive Committee has met twice a year. The September meeting was the first under the new plan of holding but one meeting annually. Since 15 states, ranging from Massachusetts to Washington and Minnesota to Texas, are represented by the committee's membership, one meeting a year effects obvious economies in time and money.

Walter C. Hughes, Secretary of the Association, explained that the first convention was held at the Palmer House, Chicago, 1884, when the Association was a year old. At the 1929 convention a committee was appointed to recommend plans for commemorating the 50th anniversary. Present indications are that the Golden Jubilee convention will be held in Chicago at the new Palmer House which stands on the spot where the Association observed its first birthday. Another reason for choosing Chicago as the convention city in 1933 is the World's Fair to be held there during that year. Some discussion as to holding a confectionery exhibit at the Fair took place at the Executive Committee meeting. A committee appointed by E. B. Hutchins, president of the N. C. A., will study this matter in detail.

Several cities have invited the Association to hold its 48th convention in the spring of 1931 with them as hosts. After considering the convention's requirements, attendance and many other details the Executive Committee unanimously voted in favor of meeting again at the Hotel Stevens in Chicago. The dates to be selected will fall either in the last week of May or in the first week in June with sessions

spreading over three days instead of four as in former years. It appears likely that the convention in 1932 may go to some city farther west than Chicago.

One of the most interesting of the reports made to the Executive Committee was submitted by George H. Williamson, chairman of the advertising committee. To carry on the educational and advertising work started three years ago he announced that pledges of approximately \$375,000 had been received for the next three years. The campaign, which has been commented so favorably from without as well as from within the industry, is being operated on a budget basis of \$100,000 for 1930. Mr. Williamson sketched the progress made on Candy Week and Sweetest Day plans and said that 125 cities would promote these events this year.

Sixty meetings and sales clinics have been held during the last six months under the auspices of the Educational and Advertising Committee, Mr. Williamson reported. C. S. Clark and the Association's field staff have shown the film, "Won by a Sweet" to 175 groups. The Y. M. C. A. film booking bureau has made 402 showings of the film and has booked many more for this fall and winter. Sales of dealer helps and advertising materials and the use of publicity material originating with the Association are increasing.

Walter C. Hughes, secretary of the Association, announced that a Tariff Committee composed of Walter H. Belcher, chairman, Charles F. Haugh and Theodore R. Blakeslee would meet soon to consider what action should be taken relative to the investigations affecting the industry being made by the U. S. Tariff Commission. The Commission is making, in accordance with a resolution adopted by the Senate on July 16, an investigation of *ad valorem* duties on candy, confectionery, chocolate, cherries in brine and

other items in which the industry has a direct interest.

Individual manufacturers are showing a keen interest in the Distribution Cost Survey work reported on at the last national convention by R. R. Gilbert of the Department of Commerce. William F. Heide told the Executive Committee. All of the firms surveyed are enthusiastic over the results up to the present time, he said, and most of them expect to continue the methods used during the Survey. Manufacturers in many states have evinced a desire to have their plants used for analysis. A summary of the information obtained will probably be published by the Department of Commerce early in 1931.

Following is the membership of the Fiftieth Anniversary committee:

FIFTIETH ANNIVERSARY COMMITTEE

Chairman

PAUL F. BEICH, Paul F. Beich Company, Bloomington, Ill.

Vice Chairman

W. P. REED, Reed Candy Company, Chicago, Ill.

Charter Members of the N. C. A.

Martin Dawson, Martin Dawson & Co., Chicago, Ill.

F. W. Ruckheim, Cracker Jack Co., Chicago, Ill.

John Doscher, Doscher Brothers, Cincinnati, Ohio.

Henry Heide, Sr., Henry Heide, Inc., New York, N. Y.

Honorary Members of the N. C. A.

George P. Smith, New Haven, Conn.

D. D. Thorp, Grosse Pointe, Mich.

C. W. Costello, Lisbon, Ohio.

Henry Heide, Sr., New York, N. Y.

Ex-Presidents of the N. C. A.

A. J. Walter, National Candy Co., St. Louis, Mo.

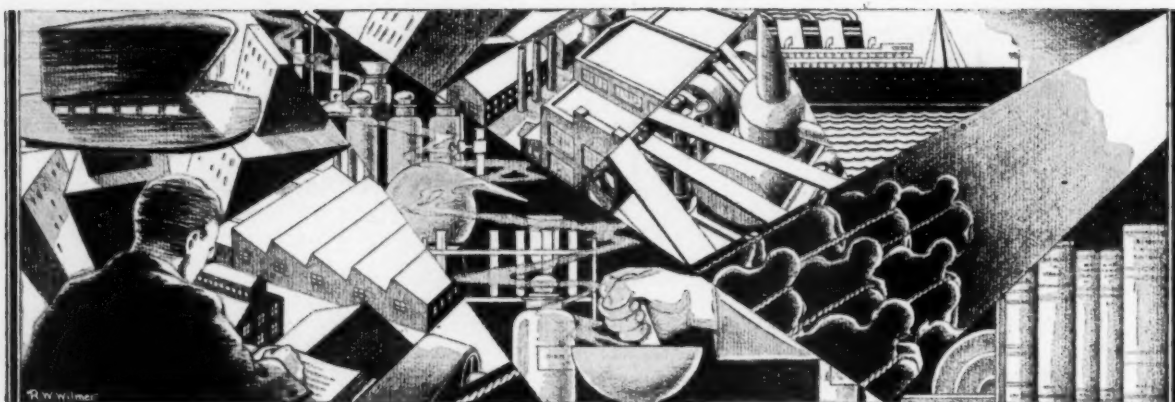
Henry Heide, Henry Heide, Inc., New York, N. Y.

Herman W. Hoops, Hawley & Hoops, New York, N. Y.

F. D. Seward, National Candy Co., St. Louis, Mo.

Louis Kuhn, American Candy Co., Milwaukee, Wis.

(Continued on page 69)



Monthly Digest of CURRENT TECHNICAL LITERATURE

Grape Candies



By G. Marsh, Fruit Products Laboratory, Univ. of California. *Fruit Products Journal*, vol. 9, p. 111

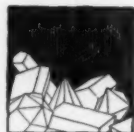
THE author has investigated the manufacture of grape candies from grape juices and concentrates. Owing to the fact that the juices and concentrates contain considerable amounts of acid, their use in candy is necessarily limited to those candies in which inversion of sugar is not of great importance. The juice or concentrate should be added cold to a previously cooked batch whenever possible in order to conserve the grape flavor to the maximum degree. Therefore the possibilities of producing a characteristically grape flavored candy probably lie in making low cooked goods.

Fruit jelly centers represent a type of candy which meets these requirements. The fruit, sugar and pectin should be mixed in the correct proportions and cooked to 222° F. at which time the fruit acid is added. While the grape contains considerable fruit acid, additional acid is required in order to adjust the acidity to a point where jelly formation will take place. Sweetness is regulated by the ratio of sugar to corn syrup added to the juice. Such a candy

can be cast in starch molds or formed in slabs to be cut in proper sizes for chocolate dipping, "sanding," or covering with an "arctic" ice coating.

A large proportion of grape juice can be used in marshmallows, the grape concentrate replacing a part of the corn syrup in the formula. However, the gelatine used tends to mask the grape flavor. Grape fondant is difficult to prepare and great care in adhering to formulas and controlling temperatures must be exercised. Jelly centers offer the greatest possibility for use of grape concentrate.

Pectin Jellies. II. Effects of Citric Acid and Various Sugars



By Asta Ohn. *Industrial and Engineering Chemistry*, vol. 22, p. 635; *Chemical Abstracts*, vol. 24, p. 4099.

CANE sugar, levulose or lactose (milk sugar) may be used to produce pectin-acid-sugar jellies. The addition of cane sugar caused a greater increase in the viscosity of pectin solutions than the addition of dextrose (corn sugar), levulose or lactose.

Pectin-acid-sugar jellies contain-

ing cane sugar were firmer in appearance and more stable than those containing dextrose, levulose or lactose. Crystal formation appeared at a lower acidity (higher pH value) in cane sugar jellies than in dextrose or lactose jellies. The acidity (pH) range for jelly formation determined either before or after the addition of sugar is approximately the same. The specific effect of the acid on the fibrils of the pectin may be one of the principal factors influencing the jelling of pectin-acid-sugar jellies.

Certified Food Colors; Their Characteristics and Tests:



By M. C. Gallagher and S. E. Owen. *American Journal of Pharmacy*, vol. 102, p. 329; *Chemical Abstracts*, vol. 24, p. 4094.

THE history of the use of food colors and the laws governing them are reviewed. A list is given of the dyes approved by the U. S. Department of Agriculture with their chemical composition, physical properties and color reactions with both acids and alkalies. A scheme for dye separation and analysis is proposed. A bibliography is appended.

Keeping Quality of White Sugars



By P. Hönig. *International Sugar Journal*, vol. 31, p. 214; *Chemical Abstracts*, vol. 24, p. 2628.

A LOW moisture content is one of the most important factors in the prevention of deterioration. Sugar should leave the centrifugals with not more than 0.6% moisture. On leaving the centrifugals it should be put through a dryer, and allowed to cool in a sieving installation, so that it comes in contact with the atmosphere at its prevailing water content. The drying and sieving plant should be installed separately and not situated in an atmosphere of high humidity.

In the case of sugars which have been sulfured in the process of manufacture, change in the color of the sugar during storage is due to the oxidation of the sulfur dioxide in the film of syrup on the crystals. Sugars containing substantial proportions of invert sugar always colored more than those which were low in this constituent. Moisture, invert sugar and acidity are the most important factors controlling the keeping quality of sugar, and of these the acidity (pH) is the most important.

Is the Forbidding of the Addition of Saponin-Containing Foam Producers to Sugar Goods (Candy) Justified?



By Alois Lode. *Zeitschrift für Untersuchung der Lebensmittel*, vol. 58, p. 311; *Chemical Abstracts*, vol. 24, p. 3064.

CERTAIN oriental candies such as Turkish honey, sultan's bread and halvah always contain saponin in the form of soaproot. It is believed that, as a measure of protection to health, the proportion of saponin should be restricted to not over one part to 500 parts by weight of the candy. Saponin is detected by its action in hemolyzing red blood corpuscles.

The Holiday Note in Candy Packages

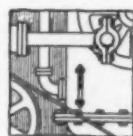
By D. M. Freeman, Vice-President, F. H. Roberts Co. *Modern Packaging*, vol. 3, p. 42.

THE weakness of the first attempts at holiday packaging was that the package had no tie-up with other regular packages which customers were accustomed to buying the other 364 days of the year. Inasmuch as individuals have definite tastes in assortments, such as all nuts, nuts and fruits, or hard and chewy centers, it is obviously good sales judgment to so design the holiday container that the customer is able to recognize his favorite assortment.

The problem of adding the holiday note without destroying the identity of the package may be accomplished in various ways. Sometimes it is merely a case of changing the color scheme. Another method which has been evolved for 1930 is that of wrapping the regular package with red transparent cellulose. This, of course, can be done only on certain types of packages where the color in the wrapping does not clash with the colors in the design. Another method which is effective is to have a cut-out card placed on top of the container which allows the characteristic part of the regular design to show through. In this case the card itself carries a suggestion of the holiday in its design.

It is also possible to change the design, or rather the costumes and settings in the design, to a holiday atmosphere. An illustration is given in which the costumes and background of figures on the package have been changed from a summer to a winter setting typical of the period. In addition to the regular line of candy retailing for one dollar a pound and up, there is also a place in most lines for some really expensive containers having a definite utility value after the candy has been eaten. Among the most popular items in this class are sewing baskets, boxes suitable for jewel cases, bridge sets and book covers. The governing idea behind holiday packages should be to give the public its favorite everyday package to which an inexpensive but artistic Christmas note has been added.

Kettles Tinned with Tin-Lead Alloys



By J. T. Dunn and H. C. L. Bloxam. *Analyst*, vol. 55, p. 34; *Fruit Products Journal*, vol. 9, p. 289.

IN CONNECTION with an investigation of cooking kettles some kettles were found which were tinned with an alloy containing two parts of lead to one part of tin. These kettles gave very unsatisfactory results, much of the lead being dissolved during boiling. There is great danger of lead poisoning from foods cooked in such kettles, and tin free from lead should be used.

Less Peanut Candy Being Eaten?

By Harold J. Clay. *The Spice Mill*, vol. 52, p. 1528.

IN CONNECTION with a discussion of the peanut market situation the writer states that one of the principal reasons why peanuts are selling more slowly is that peanut bars are not being produced in such large volume as they were a year or two ago. The writer stresses the injury to demand which results from the use of dirty or rancid peanuts. The peanut butter industry, for instance, is still using peanuts which should go into oil stock.

Chocolate as a Nerve Tonic. Anon.



The West India Committee Circular, 1929.

IT IS now claimed by eminent medical investigators that cacao is a tonic for the nerves and a remedy for obesity. The therapeutic agent in cacao is calcium, which prevents the formation of adipose tissue. A substantial proportion of calcium is required in the blood in order to combat obesity.

Cacao contains 5.7% of calcium (calculated as calcium oxide). Inasmuch as chocolate represents one of the most convenient ways of taking cacao, an effort should be made to include it at meals.

TECHNICAL LITERATURE

The Story of the Brixnut



By Harry T. Larsen. *National Nut News*, vol. 3, p. 12.

THE brixnut is a filbert of unusually large size which has been developed by C. T. Brixey of McMinnville, Ore. The kernels are exceptionally rich in flavor and a very noticeable feature is the absence of the brown pellicle which adheres to the kernel in so many other varieties of filberts.

A large number of trees have been planted in the last 8 years. This nut has proved exceptionally popular wherever it has been offered to the trade. It is destined to become a dominating factor in the filbert trade and the writer predicts that in a few years it will be the leading variety offered.

Ultrafine Soft Granulated Sugar



By B. H. Varnau and T. B. Wayne. *Facts About Sugar*, vol. 25, p. 381.

THE authors have devised a method for producing pure granulated sugar in crystals that are finer and softer than any granulated sugar heretofore produced. The syrup from which the sugar is produced is cooled to certain definite temperatures, the exact extent of cooling to obtain the best results being governed by the density, purity and temperature of the liquor or syrup being treated and the size of the crystals desired. This rapid cooling causes a substantially instantaneous, complete, and regular grain setting.

The sugar produced by this process is nearly pure sucrose, containing 99.5 to 100% sucrose. It is many times finer than the finest granulated sugar hitherto produced, the individual crystals being fine enough to pass for the major part through a 35 to 40 mesh screen. The crystals are relatively soft and, unlike the usual soft sugars, are substantially free from any adhering film of syrup.

Making Candy Containers Speak Quality



By R. A. Sullivan. *Modern Packaging*, vol. 3, p. 56.

MODERN merchandising demands that the manufacturer follow his product through to its final sales outlet in the retail store, and demands that one must "sell the eye before one sells the pocket." This is particularly true of candy. The writer discusses the packages used by the Jacobs Candy Co. of New Orleans for its domestic and export business.

The public constantly demands changes, but in changing the wraps an endeavor is made to retain the identity of the old wrap by carrying out in the design some important part, or color, of the old wrap so as to reap the benefits of the following each particular box has acquired. These changes are made at intervals in all lines regardless of where the candy is to be sold. The concession is made, however, in packages intended for Central and South America, that the predominating color shall be red—and that plump, blonde girls shall be depicted on the package. Boxes intended for sale in Europe, according to a New Orleans freight forwarder, find buyers more readily if modernistic art is featured on the package—clashing colors, arranged in jagged streaks, seem to win favor abroad, he says.

Shipments to the tropics—that is, Central and South America—involve the foiling of each piece of candy. Each piece of chocolate is wrapped in a different colored foil. This added protection in the sealed package insures delivery of its perishable contents in perfect condition. In the case of a recent shipment of candies to Australia the packages were first placed in tin-lined boxes and all the seams of the shipping boxes were then welded.

The needs of the people, their preferences in all things, especially in what may be considered minor, should be taken into consideration and featured in the packages. It will never do to force a commodity in a foreign country simply because it has a ready sale in the United States. Most countries in the tropics do not object to the use of English on packages except when they con-

tain medicines or foodstuffs that require directions for preparation or for application. The use of English on packages in foreign countries assures the buyer at a glance that the article is imported, and imported articles in certain lines are given the preference in many countries.

Sugared Grape "Honey"

By P. H. Richert and W. V. Cruess. *Fruit Products Journal*, vol. 9, p. 185.

VERY concentrated grape syrup has the property of crystallizing into a solid crystalline mass having a very fine grained texture. In this form it is well suited for a number of uses such as in cake fillings and candy centers.

Although grape syrup crystallizes at concentrations as low as 70° Brix, a concentration of 80° Brix or above is necessary for a product of this kind to insure a permanent crystalline structure, resistant to higher temperatures and having the proper texture. Crystallization is started by inoculation with previously crystallized syrup having the desired crystalline structure or with dry dextrose (corn sugar) crystals such as cerelese. Decolorization of the syrup is not necessary if the syrup of white varieties of grapes be used. However, by decolorization a practically water white product can be prepared. When used in candy the syrup functions in a manner similar to invert sugar.

Candy Containing Salts of Calcium and Phosphorus



U. S. Patent No. 1,765,867 to Henry G. Granger. *Chemical Abstracts*, vol. 24, p. 4101.

A CANDY batch of required composition is heated to about 239° F. and salts containing calcium and phosphorus, such as calcium phosphate, calcium glycerophosphate and calcium carbonate are introduced and the mixture is further heated to about 302° F.; the resulting mass is poured upon a cooling table, coloring and flavoring ingredients are added, and the batch is kneaded to mix all the ingredients together. "Mineralized" hard candy is thus produced.

Milk Confections, Their Manufacture, Analysis and Standardization

By A. Ceriotti, A. Sanguinetti, J. S. Onol and A. Sartor. *Rev. Facultad Cienc. Quim. (University La Plata)*, vol. 6, Part 1, p. 15; *Chemical Abstracts*, vol. 24, p. 2508.

"MILK CONFECTIONS" are defined as products obtained by concentrating milk with the addition of sugar and similar substances, concentration being effected by either direct heat or steam. Besides cane sugar, the materials often added are butter, honey, glucose, chocolate, cocoa and vanilla. A typical example of the analysis of 34 samples collected from various candy factories in Buenos Aires, Argentina, is: water 25.75%, nitrogenous materials 7.82%, fatty substances 7.90%, milk sugar 15.50%, cane sugar 41%, ash (mineral salts) 1.40%.

Fluidity of Chocolate

(Continued from page 41)

Chocolate containing 0.4% of the lecithin compound necessarily contains only 0.16% of soya-bean-oil, which hardly supports the original suggestion, attributing fluidity to the oil.

The question of vegetable oils which are liquid at ordinary temperatures in chocolate can be supplemented by results obtained from dilatometer experiments.

Controls were first made by using olive oil and the dilation or expansion noted over a range of temperatures; a special indicator liquid was used and this in turn was allowed for by calculation.

This preliminary control was further checked by using Arachis oil in place of the olive oil. These oils are assumed to be 100% liquid at 20° C. The next set of controls were made on fats assumed to be 100% solid at 20° C., using the same indicator liquid. The expansion of tristearin was measured under the same conditions as the oils. A further confirmation of these figures was made by replacing the last mentioned set, using tripalmitin in place of the tristearin.

The various fats tried out included



A Record-Breaking Shipment

THE illustration shows one delivery of 17,000 pounds of Peter's Crema Milk Cocoa all ready to commence its journey to Bard & Margolies, Inc. of Brooklyn, N. Y., one of the leading jobbers of the east. In view of the general depression of which we have heard so much during the past year, this would appear to be an indication that

at least one wholesaler of candy is starting off the season at a record-breaking pace, and if this continues, which it probably will, as this first shipment was followed up by several additional deliveries, there will be a whole lot of hot chocolate imbibed before this fall and winter have bid us farewell.

cacao butter and cocoanut stearin. By allowing for the normal expansion of an oil and also for the indicator fluid, the difference in contraction of these various fats and that of 100% solid control (at 20° C.) is assumed to be directly proportional to the solid fraction of the butter under examination.

The results obtained from the cacao butter in question gave a 27% liquid fraction at 20° C. Another cacao butter purified by fractional crystallization gave only a 5% liquid content at 20° C. The coconut stearine indicated as much as 64% liquid fat at 20° C.

It should be apparent from the above results that with such fats in chocolate the supposition that the addition of small percentages of liquid vegetable oils affect the fluidity is unfounded.

The thinning action of lecithin on chocolate as previously described, although not yet satisfactorily explained, is nevertheless very helpful to the manufacturer.

Park & Tilford Win High Rating in Safety Contest

The names of nineteen companies were recently announced as winners in the Greater New York Industrial

Safety Contest. Sixth on the list appeared the name of Park & Tilford, Inc.

The list of companies awarded prizes in this contest which was sponsored by the Merchants Association of New York, follows:

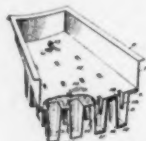
Vanderbilt Hotel Corp.
International Business Machines Corp.
Domestic Laundry.
The Pictorial Review.
Sapelin Company, Inc.
Park & Tilford, Inc.
Kahn & Feldman.
Hanan & Son.
Leo Hirsch & Co.
Brewster & Co., Inc.
J. R. Wood & Sons, Inc.
Adler's Monument and Granite Works, Inc.
Eberhard Faber Pencil Company.
The Barker Painting Company.
Devroe Works, Standard Oil Company.
Reilly Electrotape Company.
The Electrical Contractors' Association of New York.

Considering the fact that 1,485 plants, employing approximately 140,000 employees, were entered in the contest, the position of Park & Tilford in the order of awards is an honor of highest merit and reflects a record which other manufacturers of candy might aim at.

WHAT'S NEW?

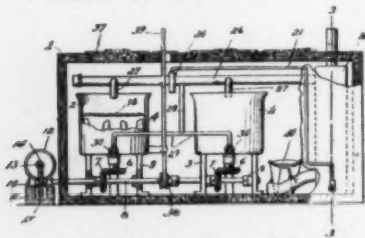
New Patents

1,758,567. Method and Apparatus for Making Frozen Confections. Frank C. Fernandez, Tucson, Ariz. Filed Aug. 12, 1927. Serial No. 212,511. 4 Claims. (Cl. 107-19.)



2. In an apparatus for making frozen confections, a tray, a pair of molds carried by and depending from said tray, a stirrup comprising a bight portion and legs, said legs extending one into each of said molds, with the bight portion in the space between the molds and entirely out of the molds, laterally deflected feet at the lower ends of said legs resting upon the bottoms of said molds, and a ball secured to said stirrup at its intermediate portion.

1,759,964. Apparatus and Method for Maintaining Chocolate in Melted Condition. Russell Stover, Denver, Colo. Filed May 3, 1926. Serial No. 106,428. 5 Claims. (Cl. 126-343.5.)



1. A heating apparatus of the character described, comprising in combination, an insulated case, heating kettles with valve controlled draw-off lines in the case, a source of heat, a hot air duct connected therewith, leads from the duct terminating within the upper part of the kettles, secondary leads from the ducts adapted to circulate the heating medium about the draw-off lines and valves, and a return duct for delivering the spent heating medium back to the heat source.

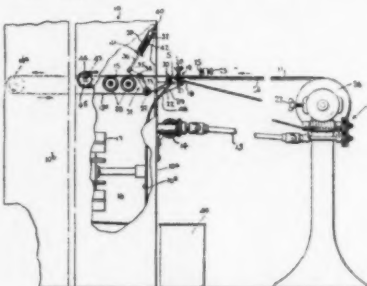
1,753,828. Confectionery-Cooling Tunnel. Jesse W. Greer and Frederick W. Greer, Cambridge, Mass. Filed June 28, 1927. Serial No. 202,149. 4 Claims. (Cl. 34-12.)



1. A cooling tunnel for cooling confections, comprising in combination, an elongated casing which is closed to the atmosphere and provided with a lower

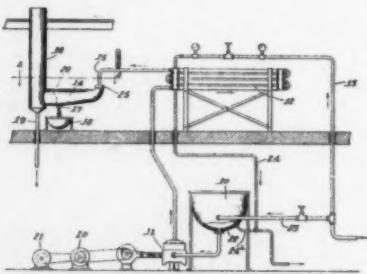
air passage and an upper air passage, means for advancing confections through the casing, blowers arranged near the opposite ends of the tunnel externally of the casing, air conduits between said air passages and blowers for forcing air from one passage to the other and arranged to introduce air into the upper passage and remove it therefrom through the top of the casing, and means for cooling the circulating air.

1,756,471. Confection-Coating Apparatus. Joseph Piccolo and John W. Villano, Brooklyn, N. Y. Filed May 21, 1927. Serial No. 193,213. 6 Claims. (Cl. 91-3.)



3. In a set-up of confection coating apparatus, including an enrober, a perforated belt overlying said enrober, and a feed table for delivering uncoated confections to the enrober, the delivery end of the table being located in line with the receiving end of said perforated belt, said ends being substantially spaced in a horizontal direction, said entire space between said ends being located beyond said enrober whereby particles from said uncoated confections will fall without entering said enrober or coming into contact with said belt.

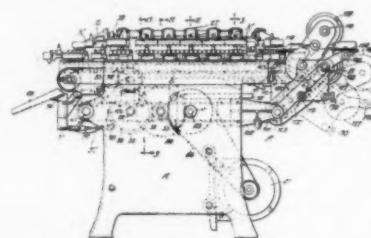
1,756,662. Method of and Apparatus for Cooking Candy. William P. Reed, Chicago, Ill. Filed Dec. 5, 1929. Serial No. 411,869. 4 Claims. (Cl. 107-4.)



3. Apparatus for cooking candy including: a heated cooking coil; a receptacle for the mixed ingredients; means for forcing the mixed ingredients from said receptacle through said coil to cook

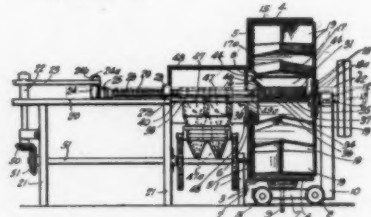
the same, and a separator to receive the cooked candy issuing from the coil, said separator permitting escape of the steam generated in the candy while in the cooking coil.

1,759,411. Plastic-Candy-Forming Machine. Robert F. Morrison, Oak Park, Ill., assignor to Elder & Robinson Co., Chicago, Ill., a Corporation of Illinois. Filed July 21, 1926. Serial No. 123,846. 23 Claims. (Cl. 107-15.)

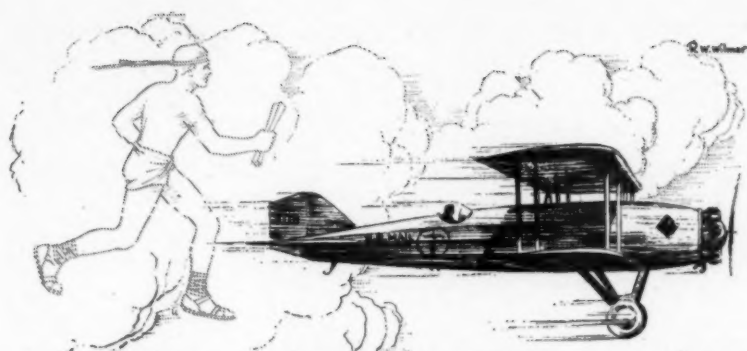


2. A plastic candy forming machine including a plurality of presses, means for operating the presses to successively act upon a continuous plastic candy rope fed to the machine, roller mechanism driven with the presses for forming and feeding a plastic candy rope to the presses, a frame for supporting said roller mechanism in operative relation to the presses, and means for shifting said frame to move the rollers out of operative relation to the presses and permit feeding the rope independent of the roller mechanism.

1,757,234. Mixing, Heating, and Distributing Unit for Confections. William H. Carson, Norman, Okla. Filed May 25, 1929. Serial No. 366,050. 6 Claims. (Cl. 107-16.)



2. A device, as described, embodying a singly centrally perforated, vertically rotatable, interiorly baffled, hollow, cylindrical, mixing drum operatively mounted upon a manually portable wheeled truck, an open ended, singly centrally perforated, stationarily mounted housing for removably receiving said drum, a reciprocating conveyor block forming a plurality of cups, adapted to enter said drum, receive a portion of mixed confection and to withdraw from said drum and deposit said confection in desired containers, all as and for the purposes specified.



AS WE SORT THE MAIL

Questions addressed to this department will be answered by us from month to month. Readers are invited to make this a forum for informal discussion of subjects of general interest to the candy industry.—The Editor.

Prof. Walter C. Russell,
Biochemist in Nutrition,
State of New Jersey,
Agricultural Experiment Station.

We note the following news item in the *New York Sun* of September 16th:

"The latest and one of the strangest ways of storing up 'artificial sunshine'—that is, ultra-violet light irradiation—is in ice cream.

"This confection, when exposed to the ultra-violet light of a mercury lamp at Rutgers University for two to ten minutes, cured rickets when fed to white rats.

"Furthermore, it was found that ice cream retained its curative properties for at least two months when stored at low temperature, about 10 degrees below zero Fahrenheit.

"The experiments were performed by Prof. Walter C. Russell and Prof. Forrest C. Button of the departments of agricultural biochemistry and dairy husbandry, and Orme J. Kahlenberg, a graduate student."

We are wondering if any such experiments have been conducted along these lines in connection with candy. If not, what do you think are its possibilities in this connection?

I do not know of any specific experiments with candy but a variety of substances has been studied. To date, however, only one individual chemical sub-

stance has been discovered which is specifically affected by the ultra-violet rays and that is ergosterol. Substances such as milk or ice cream, which are not individual chemical substances but a mixture of chemical compounds, become active presumably because they contain small amounts of ergosterol. Hence, if the mixture of chemical compounds which we call candy contains activatable material, one would expect it to become activated with the proper rays.

WALTER C. RUSSELL,
Biochemist in Nutrition.

Popular Science Monthly:

On page 117 of your December issue, there appears a short article entitled "Sunshine in Candy." In this article, you make the statement that two Viennese scientists claim to have found a way to irradiate chocolate with ultra-violet light. We are very much interested in this as we have endeavored to check up the source of it ourselves.

From all we can learn, the only substance which can be irradiated into vitamin D is ergosterol and up to the present time, ergosterol has been found principally in ergot, yeasts, and various fungi. There does not seem to be any ergosterol-bearing substance in chocolate.

Will you be good enough to put us in touch with your source of information so that we may go fur-

ther into this matter in which we are vitally interested?

EDITOR.

As a result of this correspondence we received the article from Drs. Ried and Krasso appearing on page 39 of this issue.

—MC—

We beg to acknowledge receipt of your letter and we have since read the criticism of the two products referred to in your letter.

May we say to you that we think this practice of yours is a very excellent one, and we are wholly content with the result of your examination and your report.

We agree with you perfectly on the recommendations for improvement of the 2½ pound box and are making our plans to improve same along these lines. We are sorry that the package chosen was not one of our higher-type numbers, but trust that these may come under your consideration at a later date.

R. J. C. (Springfield, Mass.)

—MC—

We are manufacturing an apple candy product that has outgrown the small plant in which it is made, and we are writing you to ask if you can put us in touch with an experienced factory lay-out man who can advise with us in arranging plans for a larger plant.

There is located here on our property a large apple-packing plant that could be adapted to the purpose in view, and we would like to get in touch with a good consultant to help us plan the necessary lay-out.

Our candy is of the Turkish paste type, starch base, and we would prefer a consultant who is experienced in the proper handling and treatment of a product of this kind.

Any suggestion that you may favor us with will be held confidentially, and your courtesy in this matter very much appreciated.

C. F. M. VIRGINIA.

Looks like an opportunity for someone! Capable parties having the necessary experience are invited to write us and we will forward their letter on to our correspondent.

—Editor.

—MC—

Very many thanks for your letter of the 22nd inst., and we much appreciate the efforts you have made on our behalf in endeavoring to

ascertain the name and address of the maker of "Icelime" and "Acetic Glaze."

It seems from your letter and other inquiries which we have made that the manufacturers of these articles have gone out of business, and while we should still be glad to have the name and address, we do not think it worth asking you to go to further trouble to obtain them.

Please accept our best thanks for your kindness in this matter.

A. H. S., Croydon, England.

—MC—

Your letter of July 17th is of interest to us. We had read the Candy Clinic in the July issue and had recognized our own product under your code number —

The Candy Clinic is one place to obtain unasked-for and unbiased criticism of a product, and we appreciate having one of our items discussed therein. While we think our package compares favorably with one or two others of the same type which you have also criticized, we shall, nevertheless, not hesitate to try to improve our own package.

At another time we hope other items in our line will be criticized.

H. F. R., Boston, Mass.

—MC—

With reference to your letter of June 21st. The writer has been out of town the past two weeks, which accounts for the delay in answering your letter.

We have been doing considerable experimenting the past two months in delivering and shipping chocolates in containers refrigerated with dry ice, and so far we have had very good results. In every instance the goods arrived in excellent condition.

Several weeks ago, on a day when the temperature was between 94 and 96 degrees, we had chocolates on our truck the entire day, and when the boxes were opened we found the chocolates to be nice and crisp and no sweating of the goods occurred after being removed from the containers. This was our main difficulty in the beginning, but we feel that this trouble has now been overcome.

At the present time this method is a little costly as we have not developed a container that will prevent dry ice from evaporating so quickly. We are now working on a container which can be manufactured at a comparatively low cost and will prove more efficient.

We hope to have more definite

data on this subject within the next few weeks, and in the meantime will be glad to give you any information you may desire.

O. J. G., Philadelphia, Pa.

—MC—

The May issue of your journal came to hand and we find quite a number of interesting articles in same.

Would you please add our name to your subscription list for three copies instead of one?

Trusting you will give this matter your attention,

MacR., Melbourne, Australia.

—MC—

You asked us to advise if we found your report on our jelly beans helpful.

Not very, we are afraid. We have put weeks of work trying to perfect our beans, and still see so much the matter with them, that we get the impression that you are easily suited.

In order to have something concrete, let us take the topic of colors, which you dismiss with the words "very good". We have spent hundreds of dollars experimenting with the colors of our jelly beans and are reasonably satisfied with the individual colors, with the exception of red. Our red is not a clear one. It is muddy, cloudy, or whatever you will. Of course you recognize it as Ponceau 3 R. Is there no way we can achieve a clear ruby-like color effect? We would be quite willing to pay anyone \$100 who would solve this one point in our jelly beans for us. Do you know where we could secure such information?

There are many other points in which we are dissatisfied with our beans, but this one example will suffice to show the nature of the service we desire.

Can you do anything for us, if not, can you suggest anyone who should be in a position to help us.

D. L. C. (Canada).

—MC—

We are interested in the process of candying or glacing of fruits, both citrus and deciduous, and will be pleased to receive information in regard to this process.

While in Florida recently, we noticed grape fruit that had had enough of the pulp removed to

make a receptacle for other candied fruit. The remaining pulp and skin of the grape fruit had been candied.

Thanks to you.

L. A. (Peru, Indiana).

In reply to your letter of March 29th, the following simple process may be adapted to either large or small scale manufacture:

"Cut lemon, orange or grape fruit peel to size desired. Boil in water until peels become soft. Then repeat boiling in fresh water.

"Prepare a syrup consisting of 4 lbs. of cane sugar and 3 quarts of water; bring this syrup to a boil, add the fruit peel to it and boil slowly for one hour. Leave the peel in syrup over night. Repeat the boiling for five days, adding enough sugar and water to keep syrup the same weight as the first syrup. The sixth and last boiling is done the same way, but cook syrup (with the peels still in) until it is 34° on crystal gauge. Drain off syrup, spread peel on wire trays, let dry for three days before packing."

Colored Shipping Containers Now Available

Important to manufacturing confectioners and others who ship merchandise in boxes is the news that the rising tide of color has reached fibre containers. Its effect is to give identity and advertising value to an article that in the past has appeared to possess no such utility. Myracol colors is the trade-mark name which will be used by the Container Corporation of America for this new development, the name signifying myriad of colors. Shippers will have a wide range of choice in selecting colors for their containers.

Corrugated fibre boxes in color, it is believed, will advertise their contents effectively from the time they leave the manufacturer's shipping room until the product is put in stock by the retail merchant. In many cases this advertising may penetrate farther, since the original shipping container is used in the windows or elsewhere in many stores where the consumer may see it. One distinct advantage of color would seem to be a saving in time and the avoidance of lost motion, for the reason that a colored container can be located more quickly and surely than the old-style drab carton.

N. C. A. Plans Golden Jubilee*(Continued from page 61)*

Paul F. Beich, Paul F. Beich Co.,
Bloomington, Ill.
A. M. Kelly, Wallace & Co., Brooklyn,
N. Y.
A. S. Colebrook, Rochester Candy
Works, Rochester, N. Y.
H. H. Harris, Harris, Woodson Co.,
Inc., Lynchburg, Va.
Walter H. Belcher, Walter M. Lowney
Co., Boston, Mass.
V. L. Price, National Candy Co., St.
Louis, Mo.
Wm. F. Heide, Henry Heide, Inc.,
New York, N. Y.
L. C. Blunt, W. C. Nevin Candy Co.,
Denver, Colo.

State Chairmen

ALABAMA—M. M. Lehmann, Ameri-
can Candy Mfg. Co., Selma.
ARKANSAS—Harry G. Leiser, A.
Karcher Candy Co., Little Rock.
CALIFORNIA—E. A. Hoffman, Hoff-
man Candy Co., Los Angeles.
CONNECTICUT—Theo. R. Blakes-
lee, Bradley-Smith Co., New Haven.
FLORIDA—Russell McPhail, Mc-
Phail Chocolates, Inc., Jacksonville.
GEORGIA—Brooks Morgan, Block
Candy Co., Atlanta.
IDAHO—Chas. F. Adams, Idaho Can-
dy Co., Boise.
ILLINOIS—W. P. Reed, Reed Candy
Co., Chicago.
INDIANA—A. J. Cox, Dilling & Co.,
Indianapolis.
IOWA—Geo. E. Williamson, John G.
Woodward & Co., Council Bluffs.
KANSAS—A. R. Scheble, Richards-
Scheble Candy Co., Hutchinson.
KENTUCKY—C. E. Gheens, Bradas
& Gheens, Louisville.
LOUISIANA—O. B. Elmer, Elmer
Candy Co., New Orleans.
MARYLAND—Jerome F. Blome,
Geo. Blome & Son Co., Baltimore.
MICHIGAN—J. W. Putnam, Putnam
Factory, Grand Rapids.
MINNESOTA—D. W. Aberle, Henry
C. Garrett, Inc., St. Paul.
NEBRASKA—Frank E. Gillen, Gillen
& Boney, Lincoln.
NEW JERSEY—Jacob L. Schwarz,
Schwarz & Sons, Newark.
NORTH DAKOTA—S. H. Booth,
Congress Candy Co., Grand Forks.
OHIO—M. A. McDonnell, Puritan
Chocolate Co., Cincinnati.
OKLAHOMA—R. G. Davis, Country
Club Packing Co., Muskogee.
OREGON—W. A. McDonald, Tru-
Blu Biscuit Co., Portland.
PENNSYLVANIA—L. L. McIlhen-
ney, Stephen F. Whitman & Son,
Inc., Philadelphia.
RHODE ISLAND—Fred H. Barrows,
Gibson's, Inc., Providence.
SOUTH DAKOTA—A. L. Rainalter,
Minnehaha Candy Co., Sioux Falls.
TENNESSEE—A. H. Steere, Little-
field & Steere, Knoxville.
TEXAS—John King, King Candy Co.,
Fort Worth.
UTAH—Leon Sweet, Sweet Candy
Co., Salt Lake City.
VERMONT—Robert W. Smith, Smith
& Son, Inc., White River Junction.
WASHINGTON—Chester E. Rob-
erts, Imperial Candy Co., Seattle.
WISCONSIN—E. B. Hutchins, The
Bonita Co., Fond du Lac.

Relation of Manufacturer and Chain Store*(Continued from page 57)*

for freight zoning, mail zoning, list price zoning, etc., again becomes effective. An average of course, is made up of highs and lows.

The lows in any average when they are conscious of their position naturally complain that the highs are getting a better break; but to attempt to adjust every inequality would entail endless difficulties and in this case of nationally advertised standard merchandise would be impractical and, in the long run, detrimental.

Cooperation in Sales Promotion Pays

ADVERTISING and exploiting products for sale seem again to be necessary or advisable in conducting retail business. As a supplemental medium, tie-up advertising most assured has value—probably consumption is increased by increasing the frequency of use of products so merchandised.

Surely such cooperative advertising gives mutual benefit. With a large market already established, you gain by drawing more of this business to you. The manufacturer gains by any positive gains in consumption. It is possible to conceive that the day may come when this service will become standardized with a definite fee for service open to all to purchase just as is normally the case with space buying generally.

Basically what is the business of a distributor? Is he an agent of the manufacturer to perform the distributing or other functions on a commission or fee basis? Or, is Distributing a business of buying desirable merchandise to be resold at a profit with the belief that because of organizing ability and selling ingenuity such business could be operated to advantage.

These are some of the questions bothering distributors and manufacturers today. It is only fair to say that the ultimate solution has not yet been found.

Times and conditions are changing. Twenty years ago a nose bleed was only a nose bleed but only a few days ago it was reported that a Scotchman with a nose bleed ran ten blocks to get paid for a blood transfusion.

These conditions cannot and must not be taken lightly. They are the problems not of a single manufacturer nor a single distributor nor are they problems which can be isolated with a single group. We have learned that America cannot be isolated from other countries of the world. Just so these problems must be considered broadly and approached intelligently from the standpoint of the entire industry.

Neither the manufacturer nor the distributor can afford to get into the cut-throat business.

The manufacturer has a technique of originating and developing new products, of creating new desires, of keeping the consumer's interest aroused on foods, of persuading the consumer to spend more of her dollar on foods.

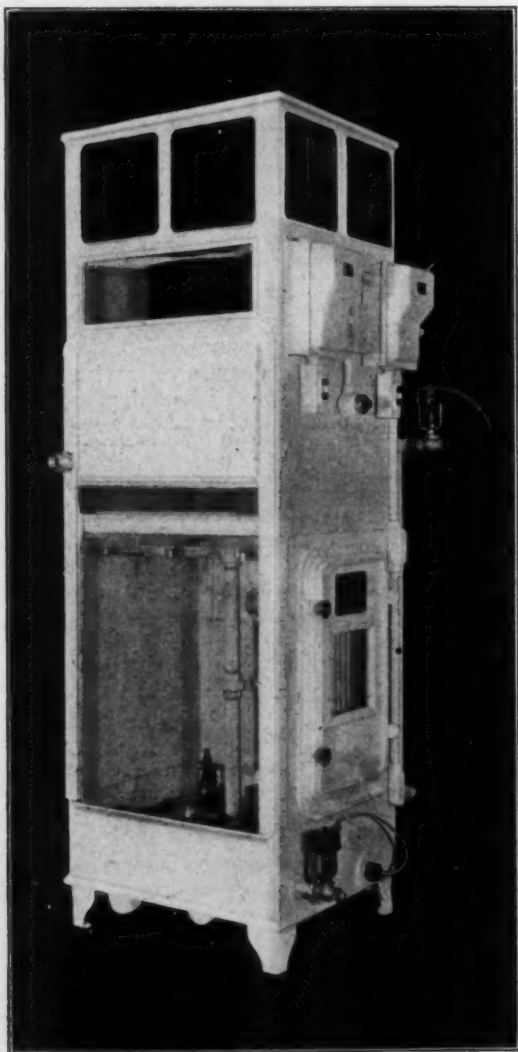
The manufacturer's advertising is in reality the distributor's advertising. It is creating for him. It is a stimulus to his business. He can make of that what he will. Key in with it and he, we, and the consumer will benefit.

Just as the manufacturer has developed a kind of technique, most assuredly the chain store has developed to a high degree the distributing technique. It has originated and developed a successful business. It has led the way in improving the standards of retailing. If sound in principle, method of operation will be very important from this time on.

We are engaged in the biggest business in the world and the most important. Food, proper food, vitalizes a nation. Improper food stunts it. Our task is to feed this nation properly. We, as manufacturers, make the food. Our distributors see that they get it. The relationship is plain. Our united business transcends profit which is of course essential. It borders on a solemn duty. To operate it properly, and efficiently is a challenge which should be accepted by manufacturers and distributors alike as their mutual obligation.



Do You Want to Control the Weather in *Your* Small Factory or Department?



HAVE you often wished that you could control the weather in your factory? . . . that you could put your enrobing and packing on a uniform, all-season basis, regardless of outdoor weather conditions? . . . that you could speed up production and packing schedules? . . . that you could improve quality, cut costs, better working conditions for employees?

You *can* . . . with the Carrier Unit Air Conditioner, designed to bring the many advantages of Manufactured Weather within the reach of even the smallest factory or individual department. You can create and maintain a clean, cool atmosphere, at the temperature and humidity exactly suited to each operation. The weather no longer need play havoc with your production and the quality of your product.

This newest Unit is not just another piece of machinery . . . nor is it a luxury. It is a highly essential piece of *production equipment* . . . a profitable investment.

If you are not already familiar with what the Carrier Unit Air Conditioner is . . . what it does . . . how it can increase efficiency and economy in *your* factory . . . it will pay you to write for descriptive literature and to consult with Carrier Engineers. Address Newark or any of our branch offices.

Carrier Engineering Corporation

NEWARK, NEW JERSEY

OFFICES:

New York Philadelphia Boston Chicago Cleveland Detroit Washington Dallas Los Angeles

Export Division: 505 FIFTH AVENUE, NEW YORK

CARRIER ENGINEERING Co., Ltd.

London Paris Bombay Calcutta
Johannesburg

CARRIER LUFTTECHNISCHE
GESELLSCHAFT
Stuttgart Berlin



THE MAJORS ON PARADE

WHAT chance has the candy buyer with the hesitating manner and the wandering eye to pass by these Majors in their sparkling Cellophane uniforms! He succumbs to the tempting sight and the demand of his appetite.

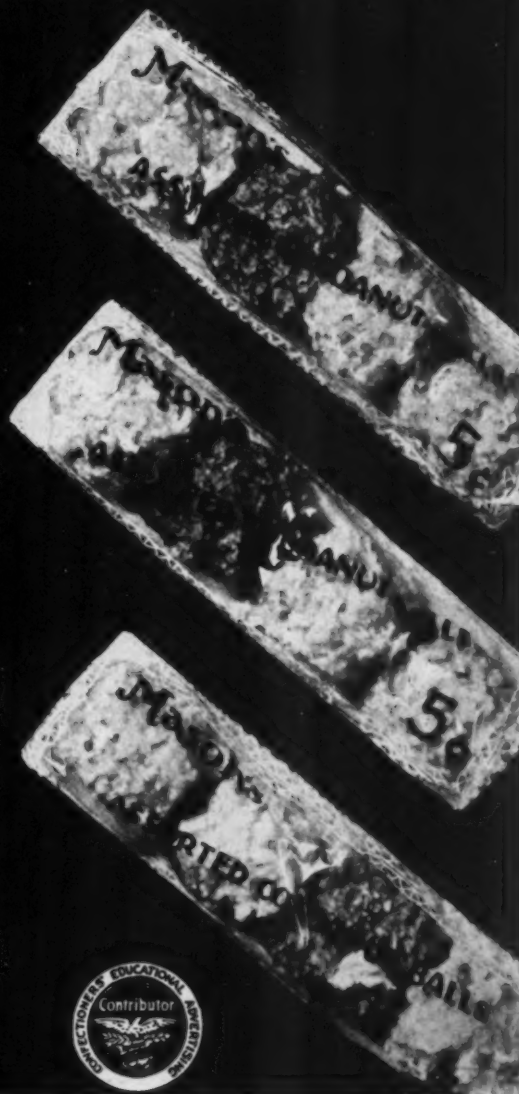
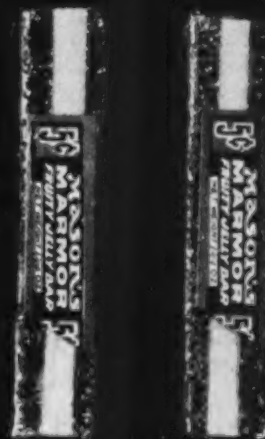
Cellophane gives small candy units all the chance in the world to vamp the customer. That is one reason why sales of confections wrapped in Cellophane keep going up. The other reasons are just as important. Cellophane keeps the product clean . . . and fresh. The result? Repeat sales and heaping profits.

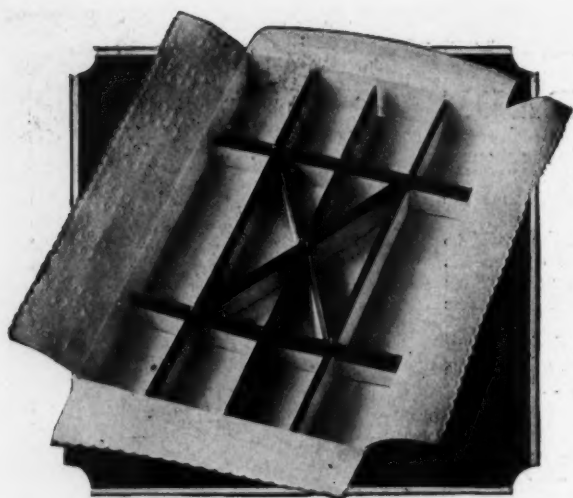
Our Package Development Department has helped design many Cellophane packages for new confections. Let it suggest sales-stimulating ideas for you, too. Du Pont Cellophane Co., Inc., 2 Park Ave., N. Y. C.



Cellophane

Cellophane is the registered trademark of the Du Pont Cellophane Company, Inc., to designate its transparent cellulose sheeting.





Economical Protection Appearance Improved

A package containing leaking or crushed pieces of candy has a job lot appearance. Consider the reputation you have at stake. Then consider the trivial cost of partitions which will not only protect your goods while in transit, but will also give that final touch of attractiveness so appealing to the purchaser.



Chocolate Dividers

A divider of distinction, in perfect harmony with the rich brown of your chocolates.

Also all kinds of layer cards, paraffined as requested.

Watch this space each month for new ideas in candy packing.

Rapid Cutting Co., Inc.

SPECIALTIES OF

PAPER & CARDBOARD NOVELTIES

55-57 HAVEMEYER STREET

278-280-282-284 NORTH 6TH STREET

BROOKLYN, N. Y.

Conserving Flavor in Cocoa Powder

(Continued from page 45)

fault which has been assumed to be an essentially insular English failing.

Cocoa powders again can be divided into the straight cocoa powders which are plain, roasted and ground nibs, expressed to a greater or less degree, and alkalized cocoa powders often called "Dutch" powders. The former rely for their aroma and quality entirely upon the natural aroma of the cacao used, and hence, being, in fact, a concentrated product of cacao, after some fat has been removed, are best prepared from mild, aromatic blends containing at least some Arriba. Alkalized cocoa powders owe their flavor, to some extent at any rate, to manipulation, for it is unquestionable that the aroma of the treated cacao is appreciably changed, and the color of the powder markedly affected also.

Effects of Alkalizing

Though alkalized cocoa powders were first produced from high-grade cacaos with the object of making a palatable drink that would hold up in suspension, without quick separation of solids—in other words, an emulsified drink—more attention is given today to securing, by alkali treatment, a certain flavor from cheap-grade cacaos approaching that associated in the cocoa drinker's mind with the first alkalized powders. The use of the word "soluble" applied to alkalized cocoa is misleading, for its solubility is not appreciably increased by such treatment. In the soft drink business emulsifying agents are now commonly used, and there is little excuse for alkalized cocoa powders being used solely for the purpose of utilizing their own improved emulsifying properties. Whether or no the flavor of cocoa is improved by alkalizing is questionable, though it can be stated emphatically that a certain degree of softness and mellowness is imparted to the palate, partially owing to reduction of acidity, tartness and bitterness.

(To be continued)



